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NOVEMBER ::: 1909

The American Journal of Clinical Medicine

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EDITORIAL DEPARTMENT

No Time Like the Present 1171
Be Business Like 1172
Cook and Peary—And the Pole 1173
Aconite Poisoning 1173
The Doctor's Responsibility 1174
The Field of Chionanthus 1176
Pure Milk, Sanitation—Plus? 1176
The Old—the New—Doctor 1177
Helonin 1178
How Colchicine Acts 1179
"Material" Instead of Sick People 1180
With One Another: Get Close 1181
We Demand the Truth 1181
The Doctor of the Future 1182
Have you seen Cases of Pellagra? 1183
More About Pellagra 1184
The Problem of the Trained Nurse 1184

LEADING ARTICLES

The Payment of Commissions. EDWARDS 1185
Morphine and Its Uses. WAUGH 1189
Atropine and Similar Alkaloids. PATTERSON 1194
Atropine in Labor and in Hemorrhage. TULLER 1196
Lessons in Hot-Air Therapy. TRACY 1198
Suggestions to the Expectant Mother. AUSTIN 1200
The Therapeutics of Calcium Sulphide. USSHER 1203
Therapeutic Mechanism. GRAY 1208
Effects of High-Frequency Currents on Gray Hair. EBERHART 1211
Hypertrichosis, or Hirsuties. RICE 1213
Carcinoma of the Uterus—Rare Form. GIBBES 1216
Eye-Symptoms of General Disease. SHASTID 1217
A Country Doctor's Life in Hawaii. BY HIS WIFE 1219
Some Remedies of Practical Therapeutic Value. THRUSH 1222

SURGICAL, GYNECOLOGICAL, DIAGNOSTIC AND THERAPEUTIC NOTES

Commercial Helpfulness 1224
Elongation of Cervix Uteri 1224
Backache in Women 1225
New Treatment of Empyema 1225
Tuberculous Appendicitis 1225
Preserving Pathogenic Specimens 1225
Picric Acid in Burns 1226
Leukocytosis Following Thiosinamin 1226
Are Drugs of Little Use? 1226
Strychnine and Brucine 1226
Picrotoxin for the Perspiration of Gout 1227
Enuresis and Epilepsy Relieved 1227
American Association of Clinical Research 1227
Rhus Tox. in Scarlet-Fever 1227
Lecithen and Cobra-Venom 1227
Chromium Sulphate.—Lycopus and Lycopin 1227
Cottonseed Oil in Tuberculosis 1228
Therapy of Copper Phosphate 1228
Mistletoe.—The Bermuda Onion 1228

FOREIGN GLEANINGS

Nature, Function, and Pathology of Sleep 1229
Two Kinds of Spermatozoa 1232

MISCELLANEOUS

The Business Side of Medical Practice 1233
An Inhalent Treatment of Pulmonary Tuberculosis 1236
A Mistake in a Milk Formula.—What is Dosimetry 1238
Carbolic Acid in Carbuncle 1240
"Drugless Healing:" A Comment 1240
Wherein We Are Enabled "To See Oursel's As Ithers See Us" 1241
The Practice of Medicine 1243
Unity vs. Non-Unity of Drug Action 1244
Pernicious Malaria in Children 1245
A New Use for Calcium Sulphide 1246
Drug-Plant Idiosyncrasies. After-Pains 1247
The Skeleton in the Closet 1248
Good Words From Bolivia 1248
Fibrolysin in Optic Nerve Troubles 1248
Thumb-Nail Sketches 1249
Christian Science: An Answer 1249
In Re Intestinal Antisepsis 1250
Albright's "Rectal Diseases" 1251
"Was Never a Fair Woman But Would Steal Hearts" 1252
"Pediatrics" Changes Hands 1253
Was It Incipient Tetanus? 1253
Some Alkaloidal Helps and Hints from Practice 1254
Podophyllin Dosage 1256
Extensive Burn Complicated with Rhus Poisoning 1256
Curing Rattlesnake Bites.—A Cure for Chiggers 1257
Death of Dr. Watts.—Walking Typhoid 1258
Aseptic Barber Shops 1259
To the Medical Profession of the West and South 1260
POST-GRADUATE SCHOOL OF THERAPEUTICS 1261
AMONG THE BOOKS 1277
QUERIES 1279

SPECIAL LEADERS FOR NEXT MONTH

Action of Crotalin in Respiratory and Nervous Disorders ..... THOS. J. MAYS
Morphine ..... W. F. WAUGH
Opium and Its Alkaloids ..... ROBERT TISSOT
The Quack and the Laity ..... M. A. AUSTIN
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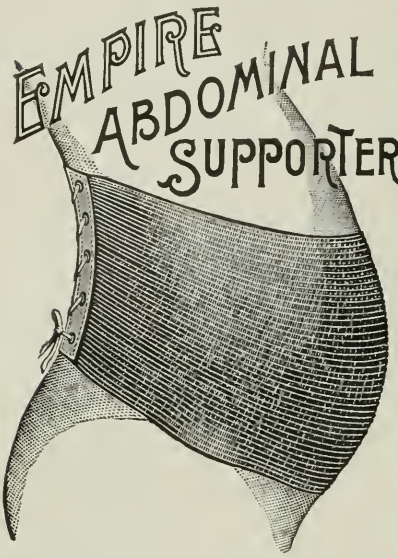

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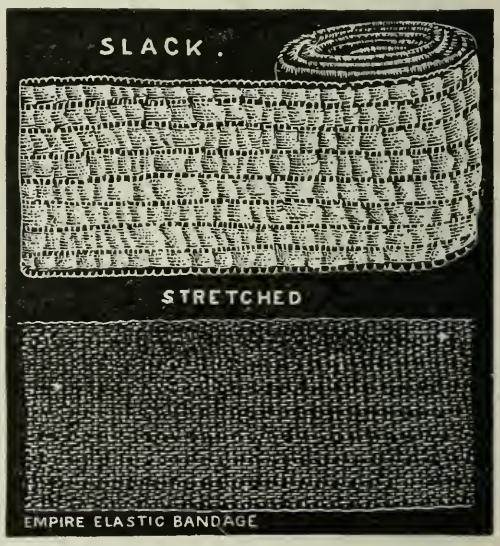

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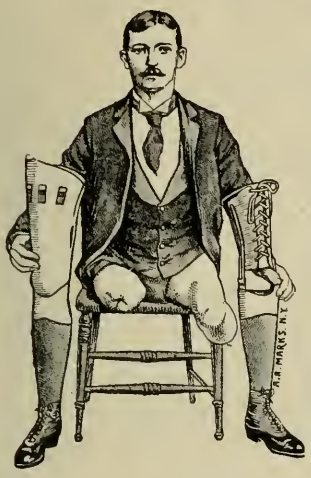

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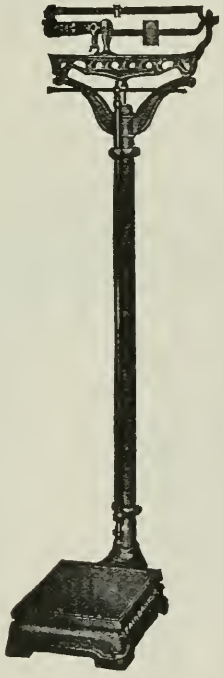

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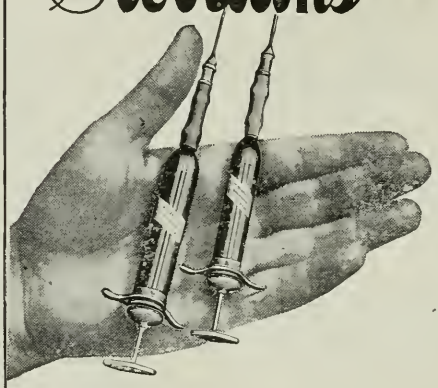

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> "**Digitalis is by far the best of the remedies of its kind.** What it can do some other remedies can do in part, but none even that part so well. Digitalis has no succedaneum."—Sir James Sawyer, in "Maladies of the Heart."
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The American Journal of Clinical Medicine

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No Time Like the Present

Never since the world began has there been a period so crowned with achievement. Every field of thought is pregnant with possibility, and no where more so than in medicine—in therapeutics. There is work for all of us, and at home

THERE never was a time when the general practician had such opportunities as at present. The world is surfeited with specialism and demands somethin more. Men have had their bodies parcelled out between numberless single-organ practicians, each one of whom has focused his mental vision on his own pet organ until he has made himself believe that it comprises the entire body. Therapeutic specialists have studied to see how much they can do with hydropathy, electricity, massage, x-radience, and numberless other therapeutic specialties, and each has grown so enamored of his pet method that he has ignored all the others. The keynote to his theme has been, "what can be done with his remedy," instead of, "what is the best for his patient?"

Sensible men are dissatisfied. They want a doctor; one who will take into consideration the man himself, and not merely his eyes, ears, nose, throat or appendix. They are not so desirous of being treated by the latest, untried, experimental fad, as they are of being cured.

Why can not men train themselves to be judicial; to estimate things at their real value instead of running off to silly exaggerations; to consider matters from the one only proper viewpoint, the patient's best interests?

I grant that hydrotherapy is a good thing; but so are massage, suggestion, each of the variations of electricity, physical culture, rational diet, and many other therapeutic methods. I willingly admit that you have accomplished wonders by relieving eye-strain, but I am not ready to assent to this as the only correct method of treating hemorrhoids.

It is the general practician who is most needed today; the man into whose hands we may willingly and confidently resign the regulation of our bodily functions and our habits as well, so as to enable us to realize from our capital in vitality the utmost possible returns in the way of long

life, health, usefulness and enjoyment. The function of the medical advisor should be to study his patient and so to direct him as to secure these objects.

Such study we have repeatedly urged upon our readers as strictly in accord with the trend of modern sentiment and development. It is especially important at present when from all sections of the country we receive reports of "nothing doing." Preventive hygiene has done much—the inroads of quackery more; and many a physician is today sitting idly in his office wondering where the money is to come from to meet his bills.

This is ridiculous. Had I but a single patient I should find something to do for him for which he would gladly pay me. I should give him such an overhauling as he never experienced; and should leave him with the conviction that there was mighty little about his body and its functions I did not know. There is so much work of this sort to be done—such a crying need for it too—that instead of there being too many doctors there are not nearly enough.

Instead of deploring dull times, let us welcome the opportunity to begin this much-needed work.

Get busy!

He must be a poor creature, indeed, whose practical convictions do not in almost all cases outrun his deliberate understanding, or who does not feel and know much more than he can give a reason for.

—Hazlitt

BE BUSINESS-LIKE!

One evening at the Medico-Legal Society we fell to discussing the practice of medicine as a money-making proposition. Canvassing the names mentioned, we concluded that one, Dr. J——, had made more money than any other practician in that part of the city, and we finally appointed a committee to interview him on the subject.

Dr. J—— received us kindly and told his story. He had come into possession of a tract of wild, worthless land, overflowed by the tides. This he had held for years, and when his tax bill came in he had "hustled" among his patients and raised money enough to pay his taxes. And in the course of an active practice covering over a third of a century this was the only money this doctor had saved from his fees. The land finally became valuable and he realized a fortune from it.

There is a moral in this story. Each one of us has to meet certain fixed expenses—rent, taxes, etc. When the time comes to pay, we usually go to our best patients, from whom we get our fees for the asking, because this is the easiest and quickest way to raise the money, and we are "too busy" to do anything else. Or, we "think" we are too busy. In reality we dislike the work of collecting so much that we shirk it.

Good-paying patients are like cash in bank. Let it be; and try collecting first from those we least expect to pay. Every dollar we get from this class is so much to the good, "like getting money from home."

A friend confided to me that he got rich by running in debt. He was in receipt of a very fair income but spent it all. Each month saw him waiting anxiously, with empty pockets, for his salary. By the advice of a friend he bought a piece of real estate, obligating himself to pay for it a certain sum every month. He did so. Many a cigar went unsmoked, many a theater ticket was unpurchased, and little luxuries disappeared from his table. He divided his expenses between those absolutely unavoidable, those that were excusable, and those entirely useless and unnecessary. It scared him to see how big a slice of his income went into this third category. But he saved the money for his payments and found himself none the worse for the self-denial.

Let me whisper in your ear: the practice of self-denial increases one's will-power—and we all like to feel that we are "strong" men.

Try it. Next payment you must make, don't draw your funds out of bank, or sell your good, salable, dividend-paying stocks, or mortgage your house; just hustle. Go at your delinquent debtors with a will, a

nerve, a determination that will win; and you will surprise some of them into letting you have some dollars that would otherwise go into the barkeeper's hands or buy madam a new bonnet she could do without. You can well afford the time, and you need the experience, the discipline, that comes from wrenching your mind away from hormones and opsonins, radiography and Bier's hyperemia, and to come down to earth and your fellow-men, who also must hustle to keep even.

Nothing gives the public that delusion about doctors being "all wealthy" like their wretched business methods. Men know *they* have to get what they earn, and if "Doc" doesn't seem to mind being swindled he must be above the need of money. A doctor who collects sharply from his patients, without being greedy or unmerciful is a benefactor to the whole profession.

COOK AND PEARY—AND THE POLE

In all the newspaper discussions over the question as to who first discovered the north-pole, Cook or Peary, one fact has been strikingly apparent: the demeanor of Dr. Cook has been modest, and his statements bear the impress of truthfulness and fairness. His attitude throughout the entire controversy has been strongly in contrast with that of Commander Peary, who from the start has made all kinds of aspersions upon the truthfulness of his competitor, seeking in every way possible to undermine the public's confidence in him.

Possibly this difference of attitude is due in part to the difference in the life-training of the two men. Cook is an educated physician, brought up in a profession which makes men the respecters of the opinions and the rights of others.

Peary's training, on the other hand, has been essentially military; as a naval officer it was his right as well as his duty to command and to brook no interference with the execution of his orders or counterdiscussion of his statements.

One man moved among other men as their associate and social equal; the other all his life has been associated with his military inferiors, as a dictator, accustomed to direct them with brusqueness, if he saw fit, and to expect unquestioning obedience to his will. This fact alone can explain or justify the harshness, the brutality of the assault of Peary upon Cook, in so far as the evidence at our hands goes to show.

We shall not attempt here to pass upon the merits of this controversy. Let the geographers do that. But our sympathies go out instinctively to Dr. Cook; and we believe that this is true of the American people generally. Abuse almost inevitably reacts upon the head of the abuser. The man who is made its "shining mark," whose motives are misconstrued, words perverted and errors magnified, and who is strong enough to bide his time and play his part like a man, true and honorable, will in the long run gather to his side those who believe "in the square deal"—and that includes everybody who is worth while.

So we look for the ultimate victory to go to Cook—and we are watching the entire controversy with peculiar interest born of a similar experience.

Yes! To this thought I hold with firm persistence;
The last result of wisdom stamps it true:
He only earns his freedom and existence
Who daily conquers them anew.

—Goethe

ACONITE POISONING

Seba reports, in *The Medical Herald*, his experience with a puerperal woman, aged 30, who, by mistake, took two teaspoonfuls of the homeopathic mother-tincture of aconite. Dr. Seba reached her bedside about thirty minutes after.

The patient, he found, was very slow in answering questions, and was unable to give any particular reason for taking the medicine. Her face showed great anxiety. The respirations were increased but shallow, the pulse weak and feeble, speech impeded, words uttered with difficulty, the skin cool, clammy and covered with perspiration, the extremities showed great muscular weakness, the eyes were listless,

the pupils slightly dilated. She appeared to be overwhelmed with a sense of weakness, and there was slight tremor of the extremities. She did not speak of tingling of the tongue at the time, but did so later. She mentioned that when she swallowed the tincture it caused a burning sensation in the stomach and throat.

Dr. Seba at once administered strychnine, 1-20 grain hypodermically, repeating in thirty minutes. Thirty minutes after that he gave her a third dose of 1-10 of a grain in the same manner, making 1-5 of a grain of strychnine in all within a single hour. Under this treatment the symptoms ameliorated, and in two hours he left the patient, feeling that she was safe, and which proved to be the case.

There seems no question that the prompt and admirably directed treatment so boldly carried out saved the patient's life.

Is it not well to remind the student, from time to time, that a physician's business is to avert disease, to heal the sick, to prolong life, and to diminish suffering?—Oliver Wendell Holmes.

THE DOCTOR'S RESPONSIBILITY

In the United States Navy, when a ship of war is coming in or going out of a harbor, it is placed in charge of the pilot. Technically the pilot is in charge of the ship, and he is responsible for her. During the time of his administration he takes the place of the captain. Nevertheless, according to the rules of the navy this does not relieve the captain. It is *his* business to see that the pilot is sober, to know that he is competent, and to know that he discharges his duties properly. If the ship should be lost, or accident occur, while under charge of the pilot, the captain will be subjected to court-martial.

Suppose the pilot is drunk. That is his fault, nevertheless it is the captain's business to know that the pilot is not drunk. Suppose the pilot should be incompetent. The responsibility is with him, nevertheless it is the captain's duty to *know* that the pilot is competent, and to see that he attends to his duties properly. There is no such a thing as shifting responsibility upon some other person.

The physician occupies precisely the same position as the captain of a man-of-war. He may prescribe and delegate to the pharmacist the duty of compounding properly, of standard quality, the remedies he desires for his patient. Nevertheless, it is still the physician's duty to know that the proper qualities of remedies are used, and that they are compounded in the proper manner. He cannot shift the responsibility on the pharmacist, because it is the doctor's business to know. *He must know.* He, primarily and above all else, is entrusted with the life and safety of the patient.

A concerted endeavor is now being made to place legal restrictions about the physician, forbidding him to dispense his own medicines, and compelling him to leave this duty entirely to the druggist.

At the same time a coordinate movement is going on, designed to limit the physician to the use of U. S. P. and N. F. preparations, and to compel him to cease specifying on his prescription whose make of each medicine he wishes to use. In some quarters this has gone the length of a demand on the part of the extremists, that the manufacturers of drugs must omit their names from the labels on their preparations. If they are supplying fluid extract of belladonna, it is to be labeled simply "fluid extract of belladonna." Not a word is to be said about the dose, the strength of the preparation, or the name of the party who manufactured it.

The design of this is to leave to the druggist the privilege of using whatever preparation he chooses. He may make it himself if he is so inclined, or he may buy it in the market, wherever he pleases.

It is especially incumbent upon us that we should not forget that we, as physicians, occupy precisely the position of the captain in the United States Navy. We are responsible. This responsibility we cannot shift upon other shoulders. We therefore must in justice to ourselves and to our patients take this position, that before any restriction of the sort is made legal, the druggist

must first fulfil the only conditions under which it is possible for our work to be carried on under those circumstances. Every preparation supplied by every druggist must be exactly identical. We are to have no more right to specify what druggist is to fill our prescription, than we will have to specify whose manufacture of each ingredient we desire. Therefore, every druggist must stand on exactly the same platform. Every preparation which each one of them uses must be identical in every respect with those used by all other druggists.

The difficulty is obvious, for not only must the preparations be of absolutely the same strength when they leave the manufacturer, but they must remain of the same strength; that is, the alcohol and water must evaporate at exactly the same ratio, the decomposition of the alkaloids in the preparation must go on in the same manner. No allowance can be made for bottles which have stood in the sun, or near the warm chimney, where their evaporation has been hastened by the heat. Nothing of the sort must happen.

We are only allowed to prescribe "tincture of aconite." It makes no difference whatsoever that the crude drugs of which preparations are made vary greatly in strength, even within pharmacopeial limits. That is not the druggist's fault. It makes no difference that the pharmacopeial requirements may be absolutely complied with in every respect, and yet two preparations from the same plant possess absolutely antagonistic properties. That makes no difference. Standardization may be insisted upon as to total alkaloids, and may be complied with literally; yet two distinct preparations made by different parties may be totally antagonistic as to their effect on the system. But that makes no difference. The druggist has complied with the law, and we have nothing to say.

It is obvious that there is very much to be done by the druggists before they can justly call upon us to assume the position which they mark out for us. In the meantime, law or no law, we as physicians should consider our patient's interest first and last, and regulate our course by those interests. It is safe to say that no law could ever be enforced against the physician who does this, and who can give a jury satisfactory reasons. The common sense of the American people can be relied upon to nullify such stupidity.

The physician must and will dispense if his own interests and those of his patients demand it; and nobody knows this better than the druggist. The cry to restrict the doctor in this matter is, we fear, simply an effort to call off his demand that the druggist shall stop prescribing. The cases are of course entirely dissimilar, for the doctor can in a few weeks learn all he needs to know of pharmacy, while it would take the druggist four years of hard work to fit him for safely prescribing—and then comes the examining board! Or, still easier; the whole difficulty in the way of the doctor's dispensing drugs disappears when he learns to use single medicines and quits mixing. Nobody could question his competence to drop a few grains of an iodide into a glass and add a measured quantity of water. The special knowledge and skill of the pharmacist are needed when we commence to make mixtures.

Don't make mixtures.

If the druggist feels that he must treat our patients let him learn to do it right, and legally, in a manner that will not make trouble with his conscience when a person dies from his ignorance.

He will retort: "How about the person who dies from the doctor's ignorance of pharmacy in putting up a mixture that explodes or forms a poisonous combination?" Exactly—he is quite right. Therefore, don't mix.

Ruskin advised artists to grind and mix their own paints, since a certain knowledge and skill came from familiarity with these tools of their craft. Ask many a druggist if any such skill comes from handling and dispensing drugs, and if confidential, he will own that his own proficiency earned in this way is such as to make him a far better doctor than any of those whose prescriptions come into his hands!

The learning that comes during the long years of the medical student's course they ignore and undervalue for the same highly satisfactory reason that they ignore and undervalue the Sanskrit literature; they hardly know that it exists.

We have nothing but friendship for every earnest, careful and intelligent pharmacist, and we wish him well; but we must insist, that when any matter of such vital interest to physician and patient as the selection of his remedies, the tools of his trade, is concerned, there can be no interference with the right of the doctor to select just the remedy that he desires, made by the firm or the individual in whose product he has the most confidence, sold by a dealer that he knows and trusts, and to carry and administer it himself if he thinks best. Next to the patient, himself, the doctor, has most at stake and the responsibility is his. The problem here involved is for him to solve—not for another.

Shun as most pernicious that frame of mind, too often, I fear, seen in physicians, which assumes an air of superiority and limits as worthy of your communion only those with satisfactory collegiate or sartorial credentials. The passports to your fellowship should be honesty of purpose and a devotion to the highest interest of our profession, and these you will find widely diffused, sometimes apparent only when you get beneath the crust of a rough exterior.—William Osler.

THE FIELD OF CHIONANTHUS

Leming of the Eclectic League of Drug Research reports (*Jour. Ther. & Diet.*) that the only field of action for chionanthus is the digestive tract, especially the liver. Its ideal case seems to be that of subacute, catarrhal and congestive conditions of the bile-secreting tissues. With this there may be a long train of symptoms such as sick-headache, eructations of gas, nausea or vomiting, neuralgic pains, constipation, clay-colored stools, jaundice and other evidences of biliary obstruction. The kidneys may suffer considerably, the specific gravity and color of the urine being increased. As a digestive stimulant and tonic, under these conditions, chionanthus will not fail, provided the trouble is not actual organic obstruction to the outflow of bile. Its action in some cases of diabetes is marked. In fact, Dr. Leming considers the high specific gravity of the urine and the suspicion of sugar a pronounced indication for this drug. While not a cure for diabetes, chionanthus will do good work where the diabetic disease is primarily excited or enhanced by hepatic derangement.

PURE MILK, SANITATION—PLUS?

The report of the Chicago Health Department for September 18 contains some significant statements, from which the following deserves quoting:

"With the exception of typhoid fever, tuberculosis, and certain of the acute contagious diseases, there is nothing in the mortality summary of the last week that is gratifying. The total deaths were 41 in excess of the preceding week and 78 higher than in the corresponding period of last year; the child mortality, similarly compared, showed increases of 7 and 36; the diarrheal-disease deaths, increases of 5 and 40; diphtheria, increases of 3 and 4; pneumonia, increases of 19 and 38; Bright's disease, increases of 2 and 15; violence, increases of 14 and 6.

"The milk inspectors investigated 86 deaths from diarrheal diseases among children under two years of age. The following is a summary of their observations:

"Twenty-nine babies over one week of age had received nothing but mother's milk. Sixteen had been fed milk which had been heated in the home; 4, Milk Commission milk; 1, commercially pasteurized milk; 1, certified milk; 4, raw milk; 9, condensed milk; 2, malted milk; 2, goat's milk. In the remaining cases it was found that 6 had been taking baby-foods; 3, gruels, only; and 9 had been fed a variety of things from the table.

"The nativity of the parents of these children was as follows: United States, 21; Poland, 27; Germany, 6; Lithuania, 5; Italy, 5, Russia, 4; Bohemia, Ireland, Holland, and Scandinavia, 3 each; the others scattering.

"Sanitary conditions of the homes where these children had lived were reported 'bad' in 12 cases; 'fair' in 46, and 'good' in 31."

This is an excellent illustration of a fact too little appreciated, that a good thing may become harmful by being pushed to unwarranted extremes. The inspection of milk, and the enforcement of such regulations as will result in a supply of a good, wholesome article, are certainly advisable. Good sanitation of the home is also advisable, nevertheless neither of these elements, nor both combined, suffice to prevent death.

It is significant that a large proportion of the children dying were born in the United States, and presumably the offspring of intelligent, educated people who know what good hygiene means and take pains to provide it. The Department's report as to the sanitary conditions of the homes is certainly most favorable.

Taken altogether, this report shows that despite good milk and good hygiene a large number, far too large, of our infants die of the diarrheal diseases common in the summer.

To the best of our ability we have supported the action of the Chicago health authorities in their endeavor to secure good milk. From the time the writer first entered medical journalism, now nearly thirty years ago, he has earnestly advocated the securing of good hygiene, and has never lost an opportunity to point out the evil influence which an unhealthy environment had upon the health of the well, and its power of imparting malignancy to infectious diseases, which otherwise probably would have been mild. Nobody can accuse us of having neglected or ignored this important consideration.

Nevertheless we have claimed that there is something else; that neither securing pure food or a hygienic environment comprises the whole duty of the physician, or his means of benefiting his patients. We have earnestly insisted that the same "good hygiene" should extend to the alimentary canal as well as to the outside environment of the individual.

If the unbroken success of a quarter of a century in the practical application of this rule means anything, we have been right; and are right now—eternally right—in claiming that an enormous proportion of disease, especially in infants, is due to neglect of the alimentary canal. So we say again, be sedulous in securing pure food for the children, be equally careful in securing a hygienic environment as nearly perfect as it is possible to make it; but do not stop there, but see to the alimentary canal and make it as hygienic as you do the external environment. Do this, and the long list of deaths from diarrheal diseases will be materially shortened, if not entirely wiped out.

The sweetest lives are those to duty wed,
Whose deeds, both great and small,
Are close knit strands of an unbroken thread,
Where love ennobles all.
The world may sound no trumpet, ring no bells;
The book of life the shining record tells.
—Robert Browning.

THE OLD—THE NEW—DOCTOR

At the opening of Bennett College the other evening Prof. Lewis made a remark that is worthy of consideration. One speaker had mentioned in terms of appreciation "the old doctor," the type immortalized by the pen of McLaren. Prof. Lewis expressed his belief that that type had departed. The old family physician who knew every patient's constitution, and possessed a wealth of practical knowledge drawn from many years of experience, of keen observation, fortified by native wisdom and extending to men and women, as well as to matters strictly medical, eventually is being replaced by the internist.

The internal-medicine man is the product of modern medical science. He knows much, very much, that was hidden from his predecessor. He has an infinitely deeper knowledge of physiology, and at his command is an arsenal of diagnostic aids unknown to his predecessor. With these he is able to establish certainties when the old doctor could only make a shrewd guess. The realm of doubt and conjecture has been narrowed by them, and the uncertainty that too often paralyzed the arm of our predecessors has given place to a sure knowledge of the actual pathologic conditions that enables us to see clearly the evil at which we may aim. Besides this we have an immensely better arsenal of weapons, finely tempered, accurately differentiated, sure to do what we expect them and only requiring a correct appreciation of their qualities and due skill in handling them.

Certainly there is much to say in behalf of the new product, the internist. If he is so fortunate, so capable, as to add to his

scientific attainments the keen discernment of the old doctor and his deep knowledge of humanity, we shall have no regrets for the change. Know thyself, said the ancient sages. Know thy fellow-man also, is the modern dictum, that the new professional knowledge may be duly operative, the new coin become current. And while you are at it, you may make a try at studying fellow-woman, although you may never hope to know her.

Sing on, Oh Heart! the summit far
Is topped by light of yonder star;
The climb is sheer, nor paved with ease,
The wind is mournful in the trees,
But still, Oh Heart, sing on!
—Richard Wightman.

HELONIN: A VALUABLE BUT NEGLECTED REMEDY

Forbush says that in tonic doses helonias causes emetocatharsis, with enteralgia, also pain in the stomach and the reproductive organs. The mouth and throat become dry; there also is a bitter taste, and vomiting or purging. There is a burning and dragging sensation in the lower part of the abdomen. Continued moderate doses cause an irritable, quick, censorious temper, with a band feeling about the temples. The cerebral functions are exercised slowly, with vertical pain, and this is increased by steadily gazing at one point. On stooping there is vertigo and uncertainty in movement.

Helonias acts mainly through the ganglionic nerves, quite forcibly on the reproductive organs and glands, somewhat less on the membranes of the stomach and kidneys. Its action on the intestinal tract is still slighter. In the renal tract it causes profuse, albuminous, light-colored urine, voided without the patient's control, and accompanied with lumbar pains which are increased by motion. In the female, helonias causes tenderness and swelling of the breasts, intense labial itching, extending deep into the vagina and followed by persistent menorrhagia. In the male it increases sexual desire and causes tenderness in the generative organs. All symptoms are more troublesome after nightfall and are increased by motion.

Forbush considers helonias the special uterine tonic, appropriate in the treatment of many pathologic conditions. For instance, he finds it useful both for menorrhagia and amenorrhea. In the latter helonias is most serviceable in cases with disorder of digestion and anemia. It is applicable in cases for which iron is frequently prescribed. Helonias invigorates the appetite, promotes digestion, and improves the quality and increases the quantity of the blood. It is of marked service in diphtheritic debility.

Aside from the foregoing, helonias has an especial influence over the organs of generation, and is of special merit when anemia is influenced by perverted renal or reproductive functions. It restores normal uterine functions, and increases the excretion of toxins, urea and other excretory products which pass through the kidneys. Uterine congestion is relieved by it, and normal functional activity promoted. Even in habitual miscarriage and sterility helonias exercises a marked influence for good. Sterility in the female and impotence in the male come under its curative influence when due to functional wrong. Loss of sexual desire without complete loss of reproductive power comes within its domain, especially if this coexists with an abnormal secretion of urine.

In mental debility following sexual excess in either sex helonias exerts a marked beneficial influence. In mental depression following wakefulness it comes to us as the first remedy. Macrotin may often be added with benefit. Patients suffering from pruritus vulvæ are relieved by small doses of helonias, while also curing aphthous inflammation of the vagina. In the depressed cerebral conditions caused by too large doses of bromides, helonias is one of the best restoratives.

In cystic disorders with dragging in the lower abdomen and an inclination to hold up or support the abdominal contents, the relief from helonias is very satisfactory. The renal pathologic condition especially

calling for helonias is venous paresis. The patient frequently speaks of a sensation as "the feeling of bags of hot water and heaviness in the region of the kidneys;" the urine shows the presence of albumin or an excess of phosphates and of urea, besides being increased in quantity. The urine is pale and acid, the appetite faulty, sleep does not refresh, the patient urinates frequently at night, has palpitation on slightest exertion, and complains of low spirits, restlessness and general debility. Helonias quickly overcomes the phosphatic diathesis and relieves urinary irritability, restoring tonicity to the parenchyma of the kidney. In renal dropsy it has proved of great service, and should be given here to full toleration. In the vomiting induced by nephritis it will generally give relief. It has been of value in chronic diarrhea, complicated with renal or uterine diseases.

Helonias influences the salivary glands, the pancreas, the mammary glands, the testicles and the ovaries, exerting over them a stimulant and alterative action. It is useful in frequent or habitual abortion due to local weakness. It may be applied in cases influenced by emotional excitement or inflammatory conditions of the os or cervix, while caulophyllin and viburnin correspond to an irritative uterus with great sensitiveness; macrotin holding a place between the two.

In convalescence from fevers, dysentery and acute conditions in general, it is a kindly acting tonic. In gastric troubles there is no surer remedy. In atonic dyspepsia, having its beginning in hyperstimulation or attending renal or uterine disease, with loss of appetite, sense of fulness after eating, rumbling in the bowels, colic and depression of spirits, it will be found a remedy of importance.

These notes from *The Journal of Therapeutics and Dietetics* show the care with which the author has studied his cases, in order to meet exactly the indications presented in each, with exactly the indicated remedy. This seems to us a far more scientific manner than huddling together in a single prescription all the known remedies which could influence such a condition as dysmenorrhea, and giving them in a bunch, without any real knowledge as to the action of either, and nothing more than a guess as to the action of the combination.

Helonin has proved in our own hands one of the most reliable remedies for dysmenorrhea we have ever tried. In cases where this affection had been the cause of the morphine habit, after the latter had been cured, we have found that by commencing the use of helonin a few days before the expected menstruation the pains could be so completely suppressed as to remove all need of opiates or other powerful analgesants. We give from one to six centigrams every hour, preferring the small doses and giving each in a teaspoonful of very hot water. These small cumulative doses answer admirably. Helonin may be given as long as the pain continues, in increasing doses.

As a general uterine tonic an average dose is one grain thrice daily. It is best to begin with a centigram and gradually increase the doses until the desired effect has been secured.

HOW COLCHICINE ACTS

Murrell, in *The Clinical Journal*, says that colchicine in excessive doses induces motor and sensory paralysis, with death from respiratory failure. Its action is curiously delayed, there being a latent period from one to three hours. It expels leukocytes from the blood, collecting them in the bone-marrow and lungs. After a time they return to the peripheral circulation, and it is then found that there has been an increase of the white cells, especially of the polymorphonuclear variety. It is possible that in this curious action may be found a clue to the beneficial action of colchicine in gout.

It sometimes increases the flow of urine slightly, but has been known to produce anuria of many hours' duration. Murrell recommends colchicine in doses of one milligram. It is not necessary to push this drug to the point of producing purgation. It does not increase the excretion of uric

acid, and in healthy persons does not produce any other symptoms save cholagog purgation.

Be strong to battle in the strife,
Be true when others doubt you;
Don't think that Money's all in life,—
But carry some about you.
—Wilkins, in "The Red Back."

"MATERIAL" INSTEAD OF SICK PEOPLE

An editorial under the above caption, in the Wyoming section of *The Western Medical Review*, quoted from *The Medical Brief*, is so in harmony with the views and beliefs of this journal that we quote it in full:

"We hear a new word in the mouths of socalled up-to-date doctors. It is 'material.' They do not speak of patients any more. They talk about 'material.' In other words, they have forgotten why people consult them. They are looking at the patient through a lens which sees only 'interesting' cases.

"They have forgotten the human side of the practice of medicine. They have gone mad on latter-day science and view with scorn the 'old-fashioned' doctor who tried to symphatize with his patient, who views him as a sick man who needs not only an examination and the proper medicine, but a little human sympathy and consolation as well.

"This attitude is often engendered by a too long residence in a hospital by medical men who cannot stand the grind and hurry of such work. They become automatons and look upon every case that comes to them as so much 'material' to be gone over, to be scrutinized and often to be even deprived of medicine while awaiting the oncoming of 'interesting' symptoms.

"This frame of mind is only too quickly seen by the sick man and his relatives and friends and is simply another reason why the public is losing confidence in the medical profession and is seeking relief and consolation in the many cults and faith cures that are springing up about us.

"We are losing ground on account of this pernicious attitude. We are committing a grave error not only in so allowing ourselves to assume this cold-blooded position, but of encouraging the young men in medicine in the same way.

"The medical student apes the ways of his teachers, and we must confess that many teachers of medicine have become such 'material' doctors. Let us have a little more humanity and let it be so mixed with our scientific impulses that the sick may not have occasion to look upon his doctor as a scientific observer, but rather as a friend and helper.

"The day will be a gloomy one for the profession of medicine when we have all become 'materialized' as so many have already become. Throw off this bad influence and get back to the good old days when the doctor was the counselor, the medical attendant, the father-confessor and the prop and support of his clientele.

"Well people may be interested and eager to hear all about scientific medicine, but when they become sick they want no more talk on science, on 'material,' on 'interesting cases,' but they want relief. Let us give it to them. Doctors should remember that their function is to heal the sick. Stick to your bacon and administer comfort as well as medicine. If you do this, you will be thrice blessed. If you do not, you will soon find that as medical men you are marooned in a slough of failure, while your patients whom you regarded as material have either passed away into eternity or have become the clientele of the Christian scientists, the Emmanuelists or some other freakish cult."

The pendulum has swung too far into theory, there is no doubt about that, but it will soon reach its proper amplitude and the medical clock will keep better time than ever.

The profession is evolving rapidly from the old to the new line of thought. What was shrewdly guessed at twenty years ago we are just coming to know. Just so far as science discloses truth and gives us the better way, it is good; but when it takes from us beliefs founded on experience, even though they may be more or less empiric, giving us nothing better and more tangible in return, it becomes a curse.

Let us have investigation by all means, but let it be for practical good that can be applied by the average man for the uplift along rational lines rather than the tear-down of the profession, which can never do its best work squared and compassed by a theory that does not fit conditions as we find them.

Oh, sing for the vale of Peace
Where zephyrs are slow and soft,
Where ragings and strivings cease
And the skylark soars aloft!
Oh, sing for the hearts that leap
And rise to the stress of life,
And sing for the eyes too brave to weep
And the souls too great for strife!
—Clarissa Dixon, in "Success"

WITH ONE ANOTHER: GET CLOSE

Too often in our intercourse with our fellow physicians we get into the habit of setting ourselves on little pedestals, looking down from the superior height upon the "common" men about us. We assume to see their ignorance, their unskilfulness, their coarseness, their cupidity, their sordid commercialism—all their weaknesses stand out in sharp contrast with the ideals that inspire, as we feel, our own lives.

This attitude is all wrong. All these things may be and often are but the mere externals, the rugged bark of a sound and sturdy oak of character. If we can divest ourselves of our self-pride and meet all men on the same plane we shall find that the world is not so full of "fools" and "liars" and "rascals" as in our pharisaic folly we have too often thought and said.

There are few men who do not respect fair dealing, believe in honesty and honor, admire manly courage and really desire to deserve the good-will of others. Our differences are in the main differences of interpretation—and these differences can only be made to disappear when we can talk them over with mutual respect and consideration.

In other words, we need to have more confidence in one another. We may and should differ in our belief in facts and their interpretation—for out of such difference, and our willingness to stand up and fight for what we believe, comes all progress; but that is no reason why we should stigmatize our opponent with epithets or seek to destroy the credibility of his statements with innuendoes.

Let's get a little closer to men's hearts—a little closer to one another. That's a foundation to build upon that will stand. Let's get together, work together, for the common good.

WE DEMAND THE TRUTH

In *American Medicine* for August, among many other good things, appears the following editorial which we quote, as follows:

"The pharmaceutical manufacturer must realize that a new order henceforth exists. Secrecy concerning the character and quantity of active ingredients will no longer be tolerated by the intelligent physicians of the country. The good men are the busy men and the men whose patronage is the most desirable.

"Vague, indefinite or unwarranted statements concerning the character or action of a remedy will be fatal. Exaggerated or extravagant claims will repel and raise prejudices. As a matter of fact, plain statements of character, formula, action, uses and methods of administration will do today all that the wildest claims ever did.

"The great *desideratum* is merit. Any product or preparation that has real intrinsic worth will receive the support of the profession—and that without brass bands or fireworks.

"The advertising and descriptive literature should be of the highest and most scientific character, prepared if possible by a competent medical man. The maintenance of good faith in every detail is essential as never before. Finally we can think of no expression that carries our thought so accurately as that of the old southern darkey who based his hopes for the hereafter on the fact that he had "always toted fair."

"The pharmaceutical manufacturers who 'tote fair' may count on the success that

their products deserve. But those who do not—and we are glad to state that we know mighty few of this class—no matter how valuable their products, will always be hopelessly handicapped."

Exactly! This has been the CLINIC'S position and demand for many years. This is square to the doctor, and nothing else goes. While old-time manufacturers have worked along other lines to a greater or less extent; while this action, in conformity to custom, has been tolerated, it is no longer in favor with the profession, which is rapidly transferring its confidence, as it should do, to those who protect their interests in this respect and who treat them fairly and justly in all things else.

Definite, true, nonsecret preparations of definite standards of activity and the same ethically marketed in the interests of the profession, along right lines—these are what the medical men want, and should of a right demand. *Nothing else goes!*

Good for you, Brother Lewis; you're right in line. Keep it up!

God keep me well, as hitherto. May he grant me attention, diligence and patience to do my duties as a physician, with strictest conscientiousness toward every patient of whatever class. May he remove from my heart every lack of virtue and every vice, rapacity, envy, dislike, haughtiness, conceit, levity, coarseness, or other vices which are unseemly for any man, and especially most unseemly to the physician. My God! The exercise of my art is difficult! Guide thou me in it, and strengthen me that I be not timid or tired when things do not go according to my wishes.—Prayer of E. L. Heim, a physician living from 1747 to 1834.

THE DOCTOR OF THE FUTURE

In a recent address Dr. Woods Hutchinson made the prediction that some of us would live to see tuberculosis as nearly extinct as leprosy and smallpox now are. "We doctors," said he, "used to live by typhoid in the fall, pneumonia in the winter and influenza in the spring. A doctor with a fair practice could always count on from $300 to $3000 every fall from typhoid fever. Now that is practically gone."

The doctor also called attention to the infrequency of the visits of the stork these latter days and the shrinkage of the professional income resulting therefrom. He might also have told of the rapid reduction and promised disappearance of malaria and yellow fever, due to a study of the part played by the mosquito, the enormous shrinkage of diarrheal diseases as a result of the regulation of the food supply, the quick cure or certain prevention of tetanus, plague, diphtheria and meningitis already given or promised by the serum-workers, and the long-expected panacea for cancer, which Dr. John B. Murphy says we shall have within five years. With municipal hospitals for the enforced treatment of all the acute contagious diseases and state institutions for the care of those chronically afflicted, apparently the family doctor is destined to become as rare as the dodo or the dinosaur.

However, in the words of the ubiquitous Munyon, "There is hope!" We are in a transition period. While old fields of activity are closing for the physician, new ones are constantly being opened. The Harvard Medical School is one of the first to recognize this fact by the establishment of a department of preventive medicine, with Dr. Milton J. Rosenau of the Marine Hospital Service at its head.

The modern demand that the State shall take cognizance of the health of our citizens is a natural correlate of the rapidly changing economic conditions of life. Our people are moving into the congested industrial centers and living under unnatural conditions of stress that were almost unknown half a century ago. Think of the dangers to health and life involved in our great manufacturing establishments, mammoth mercantile enterprises, the development of our mines and the building of our railroads. There is going to be work enough cut out, in this field alone, for the best energies of thousands of able physicians.

Nor is this all. While there is human folly, passion and avarice, and so long as the twin curses of great poverty and great riches persist there will be disease and suffering requiring our attention. These things have a moral as well as a professional side.

The personal relation between physician and patient will become closer and more intimate. Not only will men come to us for relief and comfort when they are sick; with the coming of the better-educated, better-trained physician of the future confidence in the value of his services will increase and they will turn to him as a means of keeping well.

Nor will the services of the physician of the future be confined to giving advice concerning diet, exercise, hours of sleep, ventilation, heating and sewage disposal. He will give medicine. While there will be less of indiscriminate drugging there will always be necessity for the intelligent administration of indicated remedies—which will be used more and more to arrest disease in its incipiency. The congested and overloaded bowel will always call for purgatives; the excited or sluggish circulation will always demand correction; there will always be pain which will cry out for relief; and the active minds of scientific men will always be searching for new remedies for the amelioration or cure of disease.

No, the future of the doctor is by no means a gloomy one. Some will suffer during the transition period, but mostly those who fail to see the signs of the times and, therefore, do not adjust themselves to them. Is business slow because there is no more typhoid in your town? Fill in the spare hours with preparation for bigger and broader work.

Commence to talk to your friends and clients the advantages of taking proper measures and suitable treatment for the preservation of health. Show them how it will pay them better than to let the little ailments run until they get to be serious diseases. Get them to come into your office "to be looked over" several times a year. There isn't a family of your acquaintance in which there isn't at least one person who is anxious for relief for some ailment, slight or severe. Exhaust the possibilities of diagnosis and treatment in such a case.

Let us turn our faces toward the front, with hope and strength, preparing ourselves for the greater mission that is ours. We who believe in alkaloidal therapeutics, which stands on the very firing-line of therapeutic efficiency, have reason to welcome the change; for do we not believe in jugulating disease in its incipiency by the most definite, the most accurate and the most efficient means obtainable by the physician?

Joyous and jaunty labor is beautiful, but labor, sullen and sour, eats out the heart, slants the brow and puts lime in the bones.—Elbert Hubbard.

HAVE YOU SEEN CASES OF PELLAGRA?

There is no longer doubt that there are many cases of pellagra in this country. In an editorial published in the September number of CLINICAL MEDICINE, page 957, we called attention to the fact that it was becoming prevalent in the South, and to the occurrence of cases of the disease in the Cook County Insane Asylum, Chicago. Now we learn of its appearance in the Illinois Asylum for the Incurable Insane at Bartonville, near Peoria, and in other places.

We are also beginning to receive from our readers reports of suspicious cases. One such report of undoubted pellagra comes to us from North Carolina, another is reported from Tennessee, and one doctor in Arkansas tells us of a number of suspicious cases occurring in his vicinity, several in his own practice; these are almost certainly the same disease.

These scattering reports convince us that there must be thousands of these cases which have thus far gone unrecognized. We want our readers to help us find them. We purpose to make a careful study of the disease, as a basis of an article which will attempt to do the subject justice and lay down a foundation for its intelligent treatment. Will you not, therefore, read again, and with care, the editorial in CLINICAL MEDICINE referred to, which gives a fairly complete outline of the symptoms.

You should view with suspicion any case manifesting obstinate diarrhea with salivation and stomatitis, associated with a scaly, fissured, exfoliating eruption on the back of the hands or feet, presenting attacks of head-

ache, and late in the disease melancholia. If you have such cases in your neighborhood will you not send us minute reports of the signs and symptoms, with photographs of the skin-lesions?

We particularly wish to call this matter to the attention of physicians in the South where the disease prevails most. Negroes are the principal sufferers, though whites are frequently attacked. Be sure to report as to the character of the food. We want to know more about the part played by Indian corn.

MORE ABOUT PELLAGRA

The Mobile Medical and Surgical Journal states editorially that a liberal allowance of salt seems to mitigate the symptoms of pellagra. General tonic treatment and a quiet, supporting regimen, care that the bowels and kidneys perform their functions, and an insurance of a proper amount of sleep, conclude the list of measures found useful. No antidote or specific for this insidious, fatal, unidentified poison has thus far been discovered. The editorial concludes with these words: "The watchword for life and health in this part of the country is, home-raised corn, and plenty of it, ripe and dry."

In *The Journal of the Southern Association*, J. H. Randolph says, after an able review of the literature on the subject, that arsenic and iron are much used in the treatment of pellagra. Potassium bichromate alone or combined with mercuric chloride has been claimed to give good results. Iodine undoubtedly exerts a beneficial influence upon the cutaneous symptoms, if applied in the early stages of erythema. Likewise hydrotherapy is of much service in the treatment of mental and nervous conditions. Silver nitrate has been found a valuable adjunct in the treatment of stomatitis. But for the diarrhea little of value has been found, although opium generally is used to control it. Two observers have recommended protargol in doses of one-third grain daily for the intestinal condition. Dr. Randolph states that white people are more susceptible than the black. The sexes seem equally affected.

THE PROBLEM OF THE TRAINED NURSE

The trained nurse seems to have about reached her limit in Philadelphia. A circular-letter before us tells how the physicians of that city have organized a Physicians' National Board of Regents, whose object is to check the abuses of the nurse-matter.

According to this circular, state registration has tended to develop wholesale quackery and to create a class of insubordinate nurses, who allege legal authority in support of their claim to equal privilege in directing the affairs of the sick-room. It has also tended to place the control of nursing in the hands of a few dictatorial persons whose desire seems to be to limit the supply of nurses to hospitals and to so manipulate and elevate prices as to prevent the poor and great middle classes from securing adequate nursing assistance.

The Board of Regents proposes four classifications, viz.:

1. Commissioned and Official Nurses: those having completed a two-years' (or longer) course in a general hospital or training school.

2. Approved Nurses: those having completed a two years' course in a special hospital.

3. Attendant Nurses: those engaging in nursing, after having had only a theoretical or correspondence course of instruction.

4. Provisional Nurses: those having been engaged in nursing for a year or more.

It is proposed to publish and have on file at every county medical society a national calendar of nurses showing classifications and credentials.

Eugene Underhill is the president of the executive council. Among those in this movement we notice the names of Henry Beates, Jr., Philadelphia; E. Stuver, of Colorado, and other well-known leaders of the profession. The movement certainly looks good to us.

The Payment of Commissions*

The evils growing out of the payment of commissions by the specialist to the general practician, how they originated, the reasons for their persistence, and how they may be corrected

By E. GARD EDWARDS, M. D., La Junta, Colorado

FOR a subject which concerns the welfare of all parties, probably none has received so little discussion, openly or covertly, by the profession, as the question of fee-splitting. Mention the matter privately to a brother practician, and he at once becomes as silent as the proverbial clam; speak of it in a medical society, and everybody gets the fidgets and the matter, seemingly by tacit consent, is left severely alone. If I am not mistaken, it has been only within the past year that one could even find mention of the subject in the medical journals, and then it has been from the pens of some of the rank and file. Nowhere can I find that any of the leaders, either with stained or unstained hands in this respect, have volunteered to shed light on the subject which might serve to guide those of us who, perchance, are athirst for knowledge as to "what is what" in medical ethics as related to the division of fees.

Pean the First to Divide the Fee

So far as one can discover, it was in the days of Pean, of French fame, that the scheme of fee-division came into vogue, and it is said to have been inaugurated by no less a personage than Pean himself, tradition having it that he gave one-half of fees received to the physician sending the patient. The gentle art of graft was then in its infancy, even in pursuits other than medicine and surgery. It did not long continue as a suckling infant, however, but grew apace, so that finally an effort was made to regulate the practice. One society, in Paris, put itself on record for a proportionate division, one-quarter of the honorarium in consultation and one-third in operations, after the assistants had been paid.

It is hard to gather information as to how widely this practice has obtained a foothold in foreign countries, but not many months ago it was considered news to such an extent that several daily papers made half-column mention of the scandal in "brokerage in patients" which involved many of the shining lights of the medical profession of Germany.

In our own country, we can not close our eyes to the fact that the practice is and has been for years an established custom among a large number of the profession, not a few of them being the socalled leaders. From the very nature of the practice, the participants more especially the party to whom cases are referred, do not advertise the graft

*Read before the Annual Meeting of American Academy of Medicine, Atlantic City, June 8, 1909.

openly to the profession, still many a man quietly dips down into his pocket and hands out to the physician referring the case a stipend which represents to the latter "easy money."

Fee-Splitting in the East and West

It has been said that we of the West have been worse inoculated with the germ of the fee-splitting graft than have our brethren of the East. Be that as it may, it is a custom in which we can not be truly said to excel, an experience of several years in both localities having convinced me that no one section has a monopoly of this particular microbe. Not many years ago, in Chicago, twenty out of twenty-five prominent surgeons and gynecologists fell into a trap set for them by means of a decoy letter, asking what percent they were giving for referred cases. There was an unborn scandal, but it died an abortive death because the parties were among the elect.

A resolution passed by the Minnesota Medical Association was fruitful seed sown on barren ground, even though it made a member guilty of dichotomy liable to expulsion. From this one might infer that our Minnesota brethren were wading through the quagmire with averted eyes, or else they were all of a virtuous trend and had no sin among them. *Quien sabe?*

Life, the New York publication, was so well informed that this practice exists (even if we have fondly hoped that the general public is unaware of it) as to say editorially: "The surgeon, of course, has not the opportunity to get trade that the family physician has. He has to wait for cases to be brought to him. So it naturally follows that some inducement must be offered to the physicians. The inducement decreases as the surgeon's reputation increases. Then the doctor recommends to his patients a more incompetent man because it pays him better. So the patient gets it both ways."

We all know by what divers ways the feat is accomplished. One specialist says: "My fee will be $200, but you will render the statement and remit to me." Could anything be more harmless? Another says: "You have traveled a long way with the patient and lost considerable time from your practice. Will you allow me to remunerate you in a small way for this?"—at the same time giving what each knows is much more than the amount the general practician is capable of earning during the same length of time. And even then has the unscrupulous family physician gone home and charged up his time and expenses to the hapless patient, probably already financially exsanguinated by the smiling and urbane brother of the hospital.

The "Graft" Feature of Fee-Division

Come as it may, clothed as it is in all manner of garb, fee-splitting is graft, pure and simple, whenever the general practician accepts a fee for the simple reference of a case, even when it is done in the guise of expenses paid, because the latter has, as a matter of fact, done nothing for the patient. Should it become necessary for him to leave his work, to accompany the patient, the matter of recompense rests with the latter and not with the specialist to whom the case is referred.

I candidly believe that there is a time when patient, physician and specialist should all be considered and when fee-splitting is justifiable. In this event it should be done with the full knowledge of the patient. For instance, a physician has charge of a case, let us say in surgery, that necessitates the attention of a specialist. The latter sees the patient, performs the operation and leaves the attending physician to manage the convalescence.

In fairness to all parties, let us have an understanding of the exact amount the case will cost the patient from the time the operator sees him until he is discharged by the attending physician, and let this attending physician receive of the amount a recompense commensurate with the work which will probably have to be done. The patient will know that he need not be concerned about an extra bill for the attendance over and above the surgeon's fees; the home physician will receive a remuneration for his services without losing sleep from worry as to where his

pay will come from after the distinguished specialist is paid; while the latter gentleman will not be required to pocket an insignificant fee, as has been the case too many times when he said, "O, charge what you like and send me so much," and the crafty general practician has pocketed most of the fee on the plea that he had been able to collect much less than he originally had supposed. (Thus has the biter been bitten—an unfortunate occurrence, even though he richly deserved it.)

But why should the general practician be paid for a referred case? why should he expect it? why should the patient, often-times practically unable to pay even a reasonable fee, be grafted by the combine, while the family physician, after dumping his patient on the specialist, goes on his way and leaves all the work to the specialist? Commissions paid on this basis are graft, nothing more nor less, a debasing practice that tends to supply an unworthy man with patients, for a time, simply because he will pay a commission, to the patient's financial and possibly material detriment.

"The Chickens Will Come Home to Roost"

Our sins will find us out, the chickens will come home to roost, and, sooner or later, the general public will become cognizant of the medical grafter, as it is of the municipal malefactor; and when it does, in the slang phrase of the day, "it will be all off with him."

The scheme of accepting commissions for referred cases and minor operations is so smallish and picayunish that it is hard to imagine anyone stooping so low as to practise it. Regulation by societies will be no bar to it. It is of such a nature that the means of accomplishment employed, and of its concealment, are easily hidden by the two parties interested in the deal. Regulation by societies has never controlled fee-cutting, high-toned abortion-work and sundry like evils, and it never will prevent fee-splitting. The fault lies as much with the general practician as with the specialist: one or the other (or both), desires money or business, or both. Given these, and graft grows. It requires no previous conception.

To my mind the whole matter can be ciphered down, on a moral basis, to this:

No fee should be accepted by the family physician, nor offered by the consultant, except a legitimate charge for all work done by each, from the opening of the case to its close, which fee should be understood by the patient as being fixed, except under extreme circumstances, and in the division of which both general practician and specialist should be allotted a remuneration commensurate with the services rendered by each. This is fee-splitting, to be sure, but it prevents any mistake or dissatisfaction on the part of any of the three interested parties.

Hypocrisy Is Rampant

Outwardly, a large proportion of the profession (specialists and general practician), are opposed to fee-splitting, but on the side an appalling percentage have their hands behind their backs to give or to take.

We are told that the horde of embryo specialists abroad in the land are chiefly responsible, by increasing competition, for the hold which this custom has obtained, but there are more factors than this in the issue.

It takes a weak-kneed specialist, afraid to wait for his just reward of permanent practice, for services which he has satisfactorily performed, and a grasping practician to properly perform the graft. Given these two and a mania for money-getting, and the objectionable custom will be with us always.

One reads arguments to the effect that, by curbing the number of specialists, the condition might be mitigated, but this latter condition, in twentieth-century America, is beyond the reach of regulation. Given time, every one eventually reaches his level, be he started in professional life as a specialist or general practician, and the hordes of specialists will be thinned out by the law of the survival of the fittest.

No longer can our brethren of the city claim preeminence as those who alone can do good work in special lines. A condition such as this did exist a decade ago but does not at this time. Division of fees may hold them above the rank and file for a time, but the attempt to control all the work by this

method, to meet the outside, country competition and charity-hospital service in their own communities will, in the end, not avail.

Where Do the Leaders Stand?

It is time that each of us understands where the leaders stand. A specialist who is willing to divide his fees for the sake of business should so announce himself. If he can do the work, there will be a multitude of physicians who will fall over themselves to refer cases to him. On the other hand, the man who scorns the practice will receive the hearty support of the same element in the general profession.

Debasing as is the practice, to right-minded men it seems inconceivable that the specialist could even suggest the offer of a commission, pure and simple or disguised and flavored with a minimum of sauce, or that the general practician could lower himself to the level of accepting a money favor for no service rendered. And so the unsuspecting patient loses not only the cold cash he is made to hand over—for the specialist does not, as a rule, fail to add the extra expense to the account—but often is placed in incompetent hands to the disadvantage of his health in addition to that to his pocketbook.

The lordly air affected by some specialists after the making of a few incisions which really required more nerve than skill to perform, the habit they have of obtaining for this maneuver the most of the patient's cash—leaving the long days of convalescence to their confrère who, if the patient dies, gets all of the blame, and if he lives, none of the credit, and should he render a bill receives the information that they supposed the one fee covered all services—has tended to make the general practician soured on anything that does not admit of a fair regulation of fees for services rendered by both parties.

Yet who can say which is the most to blame in plain fee-splitting or which is the smaller specimen of the genus homo, the specialist who offers the commission or the general practician who demands it. Both are tarred with the same stick and both are working against the interests of the profession, the patient and themselves.

My Success

I'VE missed the wage for which the rich aspire,
And the world's plaudits. But tho' I've missed
What most men covet, I've reached a higher
Goal than wealth and fame, for my lips are kissed
By loved ones, and I've felt the poet's thirst
And have drunk deeply from the Muse's spring,
Which of all generous gifts of gods is first
And best, the one most gracious offering.
And I have too, the love, and thanks, and prayers
Of those I've helped in sickness and in stress.
Then why repine and let a doubt prevail?
Has not God's kind hand led me unawares
Unto these lovely heights? I cannot fail,
When loved and loving, of a rich success!

—Geo. F. Butler

Morphine and Its Uses

A review of the manyfold applications and numerous indications of this wonderful remedy, drawn from the therapeutic studies of Professor Laura, of the University of Turin, and from other clinicians

By WILLIAM F. WAUGH, A. M., M. D., Chicago, Illinois

A COMMON tendency with physicians is to familiarize themselves with a few remedies; and learning to employ these in every form of disease to which they can at all be made applicable, to ignore the rest of the materia medica. Were we to be limited to a restricted selection, as in preparing for a trip to the north-pole or for a long voyage in unfrequented seas, such a restriction might be praiseworthy. But as it is, with all the resources of our exuberant pharmacology within easy reach, the question for each of us should not be with how few remedies we can practise, but, what is the *very best* for each and every case which we are called upon to treat? The man who makes good use of one drug in ten cases is not equal in our science and art to the one who makes a better use of ten drugs in the ten cases.

Morphine Useful in a Wide Variety of Cases

At the head of the list of drugs applicable in a great variety of cases stands morphine. Excepting the closely allied ethyl-alcohol, no other remedial agency approaches morphine in the number of useful applications to which it may be put, the number of cases in which it may be applied and the potency of its action. It does so many things, and it does them so well! Small wonder that that humbug, the "busy" doctor—it should be the "lazy" doctor—year by year limits himself more closely to this one sovereign drug, this panacea for all pain, all suffering.

It is a pity to demolish an idol, even in these days when faith has fled from sight; and even faith in morphine would seem better than no faith whatever in drugs. But the only real basis for faith is Truth, and unless error can be dissipated the faith cannot be true or enduring.

Of the numerous works upon morphine at my disposal I have selected the monograph by Prof. S. Laura, the great clinical teacher of the University of Turin. His faith in morphine approaches the sublime; he employs it in every affection in the nosologic list; he waves aside the objections to its application in children and in certain states where most physicians look upon it as contraindicated. In truth, his work reminds one of Shoemaker's criticism of a long-forgotten work on the treatment of emergencies: "The author's 'treatment' consists in putting a keg of laudanum on tap, and using it for everything." Nevertheless Laura is a clinician of no ordinary proficiency, and a study of his therapeutic contributions has given the writer the highest appreciation of his acumen.

It is therefore with a respectful spirit that we take up the examination of his views on morphine, bearing especially in mind that twenty years have elapsed since his great work was published, twenty years of tremendous activity in therapeutic investigation.

I shall herewith present a succinct abridgement of Laura's presentation, and expect to follow it with a second paper in which I shall take up each of his applications of morphine and see if in that particular instance this is really the best remedy at our disposal. Give the devil his due; but not a penny more.

Bouchardat says that "morphine is that alkaloid of opium which represents the useful properties of that precious medicament." Laura pronounces morphine the most important opium principle, without denying the utility of the other thebaic alkaloids or anticipating the future of those as yet but slightly known.

All the salts of morphine are insoluble in ether (Ruspini). All are quite soluble in cold water and in glycerin; which permits the use of the milk-sugar granules in extemporaneous watery solution, by the mouth or hypodermically. The hydrochloride and the hydrobromide are the best salts for ordinary use; the sulphate is good; the acetate is less stable and not so well-defined. As a calmant the hydrobromide should be preferred.

The action of morphine is different as it is given in single or in successive doses. Some persons tolerate it better than others, the idiosyncrasies being inexplicable and truly extraordinary (Laura). The abuse or prolonged use of morphine causes grave poisoning, this being pronounced by Claude Bernard the most toxic of the opium alkaloids; death supervening from paralysis of the brain, especially of the medulla and the respiratory center. Toxic phenomena, even tetaniform convulsions, are produced in man only by excessive doses, never by well-calculated therapeutic doses. Morphinism is becoming more frequent since the abuse of hypodermic injections, by wasting them, vulgarizing them, even profaning them, and rendering their technic familiar to all. Bad results are absolutely impossible with modern scientific methods of administration.

While there is some antagonism between morphine and atropine, it is not absolute but only relative.

Morphine is sedative in physiologic doses. In excessive doses the sleep induced is heavy, profound, yet troubled (Schroff); that following small doses is tranquil, especially if aconitine and digitalin have been simultaneously administered.

Burggraeve termed morphine "the king of calmants;" and with no less sagacity he added: "the most dangerous of all when abused." He also called attention to its vasomotor action, relaxing pulse-tension, lowering temperature, and inducing free perspiration. "Morphine slows the pulse and the respiration and lowers the temperature, without first raising it as does opium" (Bailly, Schroff, Onsum, Cantani).

Schmiedeberg was mistaken in asserting the identical action of opium and morphine. Cantani drew the line readily between the two, which he found to differ both in the quality and in the quantity of their action. Moreover, the effects of pure morphine are always the same, while those of opium vary widely, even to complete opposition.

Large doses of morphine determine incapacity of voluntary movement, disorder of motor equilibrium, defective coordination, and finally true anesthesia or diffuse universal paralysis—nervous disorders that vary under the influence of the reflex excitability—while in moderate doses it is simply a mild exhilarant or a physiologic excitant of the nervous system, inducing sedation only when the nervous system is morbidly exalted. The mental activity diminishes when large doses are given. Morphine exercises a certain incitor action upon the cerebrospinal cardiac centers or over the numerous centers of the myocardium; but only in small doses, while large ones usually provoke paralysis of the automatic motor centers of the heart. This has been confirmed by Schmiedeberg.

Morphine sensibly diminishes the intestinal peristaltic movements, undoubtedly by lowering the sensibility of the reflex nervous centers peculiar to the intestine (Naffe), and in this way stops intestinal spasm. Not only does morphine diminish reflex movements but it is also antisecretory, anosmotic (Bardet), and diminishes in reality the functional activity of the special secretory glands, as for example the mucous crypts, the salivary, the urinary and the sudoral; from which various indications may be drawn. Like opium, in large doses morphine produces apepsia and dyspepsia. Claude Bernard showed that it suspends peristalsis and the gastric functions, preventing digestion.

Morphine, as of course is known, is mydriatic; and Cantani observed that the myosis of morphinic slumber should be attributed to the slumber itself, since it is known that in sleep the pupils contract. But morphine contracts the pupil without inducing sleep.

The indications for morphine deduce themselves from its physiologic powers. In its vast field lie all the phenomena of erethism, of surexcitation, hyperesthesia of the nervous system, central or peripheric. Hence its great utility in many neuropathies, essential or symptomatic. The dolorific and spasmodic element, whatever its essence, its origin or its dependence, finds in morphine "the king of calmants."

Valentin recommended it in the cough of pregnancy and that of lobular pneumonia, where it calms the access, and lessens the dyspnea, which is the greatest danger. Voisin vaunted it in mental alienation. Patterson employed it with advantage against the vomiting of cholera. Pessa employed it as a general anesthetic, and chloroform is often associated with morphine to lessen the former's dangers. In one word, morphine is a sovereign calmant, and to it one may apply with more reason than to opium these words of a great master of antiquity: "*Si opium non haberem, medicinam non facerem.*"

It follows that morphine may serve usefully in headaches, in migraines during their access, in ischialgia, and generally in neuralgias and hyperesthesias, even when they approach a veritable inflammatory process. In dissipating the pain it not only causes the suffering of the patient to disappear but it thus removes one factor of the pathologic process, and one aggravating circumstance of established maladies.

Colics—hepatic, intestinal, nephritic, uterine and vesical—find in morphine a useful modifier. In prosopalgia no remedy is more active than aconitine, with which we may associate caffeine, morphine or even digitalin in certain cases. So in the frequent cases of nervousness, erethism, surexcitation of the central and peripheric nervous system through default of physiologic stimulus (more frequent than one would believe), it is well to associate with aconitine the excitants and the vital incitants, hygienic and medicinal.

Lead colic gives way to morphine more rapidly than if any form of purgative is employed. It would be prudent to add hyoscyamine and strychnine, the first to calm spasm of the unstriped fiber, the other as a tonic to sustain the muscular planes of the paretic bowel.

Morphine answers in all maladies with fever, insomnia and agitation (Burggraeve). In asthma from cerebral anemia and in the collapse dependent on this state the tonic-hyperemiant action of morphine should be truly advantageous, if given in small doses, especially in the early stages. These small doses may also be employed in adynamic forms.

Its Value in Insomnia, Spasm and Delirium

As a hypnotic it answers in insomnias dependent on special pathologic states, such as nervousness, insanity, or intense physical pain; also in certain anemic conditions of the brain, where by reestablishing the circulation it answers admirably. Insomnia due to psychopathies, exaltive or depressive, requires doses higher than does simple nervous insomnia, because morphine has less effect upon the psychic functions. Here it is necessary to associate monobromated camphor, aconitine, digitalin, and especially hyoscyamine. Laura prefers the remedies named over aldehyde, paraldehyde, and piscidia erythrina. The insomnia of the cerebral psychopathic is notoriously obstinate.

Morphine may be used in all spasmodic conditions, general or local, alone or associated with various modifiers, chosen after precise indications: in laryngospasm, bronchiospasm, hysteria, spasm of the hollow viscera, in general convulsions and in cerebropathies. It has been much praised in asthma, especially as given subcutaneously. Nevertheless, although useful, it may become perilous in asthma, because it engorges the nerve-centers, the lungs and the bronchi, in all cases where asthma accompanies or is dependent upon a localized hyperemia; as for example in the asthma of cardiopathies, through default of cardiac energy. In all such cases the sovereign respiratory remedy is strychnine.

The utility of morphine has likewise been recognized in the delirium of alcoholics.

It is extremely useful in the neuropathic manifestations of infectious maladies; in the delirium of grave fevers (typhic); in the inflammations, especially intestinal catarrhs; in intestinal ulcerations; also whenever it is desirable to calm an excess of peristaltic function, whatever the disease.

Burggraeve associated hyoscyamine and strychnine with morphine in obstinate vomiting and as a prophylactic of seasickness. In the uncontrollable vomiting of pregnancy and of hysteria, cocaine is the sovereign remedy. Injections and sprays of ether over the epigastric region may also be employed.

Schivardi first employed morphine against nervous hiccough; here Laura adds hyoscyamine. Omoboni cured spasmodic dysphagia with morphine. Burggraeve won great success here by giving it with strychnine and hyoscyamine. Deblangey used morphine for phthisical diarrhea, and Legagneur for diarrheas in general. Nicholsin and many others have vaunted morphine in delirium tremens.

As a diaphoretic the action of morphine is uncertain; more powerful agents are supplied, in the modern practician's arsenal, in pilocarpine and aconitine. Morphine finds very useful application in diabetes and in polydipsia; where we may add monobromated camphor, iron arsenate, and in some conditions, digitalin.

As an antidyscrasic and antidiathetic Laura accords to morphine no other value than that of a symptomatic auxiliary, mainly in cerebral anemia and ischemia, and against the functional disorders springing from this grave circulatory trouble. All dyscrasias and diatheses require their own special modifiers.

The Contraindications to Morphine and Its Antagonists

The antagonism of atropine and morphine is established and in some cases forms a contraindication to their simultaneous employment.

The most formal contraindications to morphine and all opiates are those stated by Cantani: The adynamia of febrile maladies; pulmonary and bronchial collapse, with loose catarrh and edema; passive states of the brain; to which Laura adds pulmonary hypostases, commencing asphyxias, passive states of the bronchial tree, and feebleness of cardiac contractions, menacing myocardial collapse. In a general way these are all states of stupor and general prostration, independent of the simple cerebral anemias that imperiously demand morphine.

Against anemias and the morbid phenomena derived from them—neuralgias, vertigos, etc.—morphine, by regulating the cerebral arterial and capillary circulation, exercises a very happy influence. By inciting and congesting the cerebrum it is extremely useful in cardiopathies and pneumopathies in which there is cerebral and cerebrobulbar anemia or ischemia; intense, with vertigo, ringing ears, lipothymia, and syncope of cerebral origin. If nervous dyspnea in general is a legitimate indication for morphine, the anguish and oppression of phthisics, so cruelly augmented during the night, finds also in it an admirable and prompt remedy. For spasmodic asthma Oliver unites morphine with atropine. Dujardin-Beaumetz employed the latter against biliary spasm or hepatic colic; Isam used it for threatened abortion; Philippon for strangulated hernia.

In cerebral anemia surely dyscrasic, in that of convalescents, in the later stages of very grave fevers of long duration, and in general in the cerebral anemia accompanying secondary anemias, in all morbid processes and maladies that by their long duration or their spoliative and denutritive action impoverish the blood, morphine calms the violent symptoms. It goes withous saying in all these cases that the therapeutic hygiene, the modifiers of the crasis, iodine, arsenic and iron, and the vital incitants, strychnine principally, should come first as curative of the fundamental malady of which the cerebral anemia is only an incident in their pathologic cycle.

In albuminuria one of the greatest dangers is uremia, principally dyspneic uremia, from encephalic ischemia; and this is favorably

modified by morphine, acting at once as a vasodilator of the vascular spasm and a hyperemiant of the brain against the cerebral ischemia (Huchard).

Enoul recommends morphine hypodermically for the pains (often so violent) that follow recent accouchements, and even for the pangs of childbirth. E. Aling prescribed it for partial muscular ruptures. But the disposition to hemorrhage or active uterine hemorrhage and the exhaustion of uterine energy or even its weakening, seem to contraindicate morphine, which is not free from menace to the life of the fetus, especially by cephalic congestion occurring during the birth. Hence Burggraeve in such cases associated with morphine hyoscyamine and strychnine, the first to dilate the cervix, the other to aid uterine contraction. In all cases it is incumbent upon the physician to act with the greatest prudence.

Pecholier employed morphine with atropine usefully in sciatica with glycosuria.

The uses and applications of morphine are so numerous and varied that there is perhaps not a single affection in which it has not been employed.

The Question of Dosage

In general, the dose of 1-6 grain, or better 1-12 grain, of morphine hydrobromide is sufficient at the beginning to test the receptivity of the patient. It is better to repeat the dose than to risk empoisonment. Never forget that morphine acts diversely on individuals according to circumstances that are not always manifest. Only very exceptionally, in persons not morphine habitués, is it permissible to exceed the commencing dose of 1-6 or 1-3 grain by injection.

Opium, according to Cantani, should be banished from the therapeutics of infants, never to be given, except in certain consumptive diarrheas, before the seventh year. Even in rebellious diarrheas in the case of small children there are better remedies at one's disposal.

The dose of morphine varies according to the age, temperament and sex, but still more according to the disease and the individual's idiosyncrasy. As a rule more than 1-3 to 1-2 grain in a day is unnecessary for adults.

One need never depart, for any given age, from the rule of small successive doses. The ostracism that for children justly strikes all crude opiates (since their complex nature does not permit us to foresee or to estimate the nature and degree of their action, and their introduction into the system of the little patient adds elements of disorder useless in the treatment and even dangerous), does not extend to morphine given fractionally; an agent pure, isolated, therapeutically definite, which if given in the necessary proportion can produce only the therapeutic effects of which we know that morphine is capable.

As to the Dynamic Modifiers

The dynamic modifiers suitable for adults are adapted to children, since the physician can always choose and measure them according to the nature and entity of the malady, caring always that the remedy is the one medicament that properly and sufficiently modifies the morbid process, causes to cease the troubles of the organism, and reestablishes the equilibrium that had been disturbed by the pathogenic factors. This is why infants support admirably and put to profit the appropriate medicaments, as compared with adults.

Very moderate doses of morphine act dynamically on the organism.

In this paper I have given a faithful transcription of Laura's monograph upon morphine, with full details of the great Italian clinician's therapeutic applications of this potent remedy. Assuredly it stands without a rival in the multiplicity of these, and in the power and promptness with which it conquers pain and affords relief. Nevertheless there is not a solitary use to which morphine may be put for which we have not a remedy equally efficacious or more so, but lacking the grave dangers and the disadvantages attending the use of morphine. This I shall attempt to demonstrate in a second paper.

Atropine and Similar Alkaloids

Some observations on peculiar physiological actions of atropine, and a comparison of this alkaloid with hyoscyamine and hyoscine, with suggestions for their therapeutic application in appropriate cases

By FRANK D. PATTERSON, M. D., Schurz, Arizona
Physician in the United States Indian Service

IN considering the physiological action of drugs, even the active principles themselves have a great variety of action, affecting in the most marked degree different organs in different patients. Ordinarily in paroxysms of asthma, a combination of strychnine with nitrite of amyl will give almost immediate relief, the strychnine by its slight vasomotor action overcoming the effect of too much loss of blood-pressure caused by the nitrite as well as steadying the heart. I have in mind one instance whereby the vasomotor action of the strychnine, instead of being moderate, as is usually the case, was so extremely marked as actually to increase the difficulty in breathing, so that atropine had to be given instead. Along this line, I wish to call attention to the varying effects of atropine in different individuals, in each case the drug-effect being the resultant of its action upon the cutaneous capillaries and upon the central nervous system.

Reversed Actions of Morphine and Atropine

In all of our textbooks on materia medica we are told that atropine is a deliriant, a drug that produces coma-vigil but not natural sleep. On the other hand, morphine is frequently mentioned as a remedy for producing sleep. In my own practice, however, I have frequently found the alleged action in this particular of these two alkaloids just exactly reversed, it being the morphine that produced the coma-vigil and the atropine that produced a condition as near normal sleep as it is possible for any drug to produce. In other words, atropine, though classed as a deliriant, has in those instances proved a true hypnotic.

In obstinate sciatica that has resisted all the usual remedies, atropine pushed to the full physiological extent has frequently very quickly relieved that most distressing condition. Well do I remember a certain case of that kind that I thus treated last winter. The patient's face was well flushed, the pupils were widely dilated, but instead of restlessness there was for eight hours on the stretch a most profound slumber.

In other instances, sometimes when administered in very moderate doses, I have noticed that the patient soon became drowsy. I myself have sometimes taken 1-100 grain of atropine sulphate to check undue looseness of the bowels, and soon found myself with a somewhat dry throat and an extremely drowsy feeling as a result.

Explanation of the Hypnotic Action of Atropine

Now, how is it that a drug classed as a deliriant can in any case act as a true hypnotic? In normal sleep, as we all know, there is a somewhat anemic condition of the brain. Atropine, by dilating the cutaneous capillaries draws the blood from the internal organs, brain included, to the surface. For that very reason atropine is of very great service in shock and hemorrhage.

We therefore have to take into consideration the direct action of atropine upon the central nervous system on the one hand, and its dilation of the cutaneous capillaries on the other. Atropine therefore will be a deliriant or a hypnotic according to whether the patient's nervous system or his peripheral blood-vessels are the more susceptible to this drug. Consequently we must be

very careful in its use among those of a hysteric or neurasthenic condition. Those of a sanguine temperament are naturally more susceptible to atropine than those of a bilious temperament.

In well-selected subjects, atropine can thus sometimes be used as a hypnotic. However, as hypnotics, hyoscyamine, hyoscine, trional or the bromides would be preferable. At least some of these other remedies should be given where the physician is not thoroughly acquainted with his patient's physical attitude toward atropine.

Hyoscyamine Compared with Atropine

Hyoscyamine in many of the textbooks is described as identical in physiological action with atropine. However, while it is similar as to its action upon the pupils, the secretions, the cutaneous capillaries, and as an anodyne, it is less abrupt in its action and may be given in somewhat larger doses. It is less marked in its cerebral action and hence more universally applicable as a hypnotic. Hyoscyamine may be given in certain excitable conditions of the nervous system where atropine would be distinctly contraindicated. It must be remembered, of course, that this alkaloid must be given with all due caution, as it is not entirely free from deliriant properties. Its use in my practice is more often as an anodyne than as a hypnotic.

For producing sleep, hyoscine has a more marked effect than either atropine of hyoscyamine, but its capillary and mydriatic properties are less prominent. I presume we are all familiar with its use as a hypodermic anesthetic in combination with morphine and cactin.

In this discussion of these alkaloids of the solanaceæ, it has been my object to bring out the fact that even in alkaloidal medication it is not simply the ordinary physiological action of the drugs that we are to take into account, but the patient's susceptibility as well, always keeping one's eyes open for various unusual drug-actions, and the various tolerances and idiosyncrasies that give rise to the same.

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[Dr. Patterson says exactly the right thing. The action of a pure alkaloid is invariably the same; its reaction on the patient depends on the patient's condition. Minute doses—just enough—of atropine may exactly restore circulatory balance, when natural sleep will follow, the obstacle interfering with the sleep-engendering processes being removed by the atropine. Too large doses swerve the balance too far the other way and prevents sleep by creating a new pathologic imbalance. These things are among those learned by earnest study of that greatest of all the textbooks—the book of Nature.—Ed.]

Live—Today!

HAPPY the man, and happy he alone,
He who can call today his own;
He who, secure within, can say,
Tomorrow do thy worst, for I have lived today.
Be fair or foul, or rain or shine,
The joys I have possessed in spite of fate are mine.
Not heaven itself upon the past has power;
But what has been, has been, and I have had my hour.

—John Dryden

Atropine in Labor and in Hemorrhage

A report of a number of cases in which this remedy has been found useful, with practical suggestions for its employment in cases of tardy labor as an oxytocic

By M. B. TULLER. M. D., Crawford, Kentucky

CASE 1. Mrs. C. P., age 17, primipara, os well dilated, but no expulsive pains—had been given various things by the women in attendance without result. Atropine, gr. 1-500, was given by me and in fifteen minutes a pain came on. In the course of half an hour a second dose was given, and pains increased in severity. She received a third similar dose, when the occiput rotated under the arch and was speedily delivered. The postpartum contraction was perfect.

Case 2. Mrs. B., age 37, 9-para. Always had hard labors and was nearly exhausted after each birth. When the os was well dilated she received 1-500 grain of atropine, and in ten minutes labor-pains set in. A second dose was administered when the head reached the arch, and a few minutes later the second stage was completed—duration thirty minutes. Postpartum contractions beyond criticism.

A Complicated and Severe Case

Case 3. Mrs. J., age 26, primipara, a large muscular woman, wife of a brother physician, in prime condition for her ordeal.

First stage was uneventful. This case was complicated with short cord, large fetus, and as nearly a dry labor as can well occur, there being just enough amniotic fluid to soil her gown the size of the hand.

Labor-pains were good at the beginning of the second stage and under ordinary conditions there would have been no indication for stimulation. Understanding, however, what confronted us, the woman was put upon atropine, 1-500 grain every twenty to thirty minutes, after which the pains became very powerful. She was taken from the bed and placed in her husband's lap to give her the advantage of gravity, and save, if possible, the necessity for the forceps, of which the country women stand in mortal fear, and for two long hours yours-truly sat in front of the patient and supported the perineum during what proved the most powerful contractions I ever saw.

Something like half an hour after birth she was given the regulation dose of ergot. I doubted its necessity, but fearing a possible relaxation and its consequences it was administered.

Two More Illustrative Cases

Case 4. Mrs. S. B., age 20, second child. First child was still-born from prolonged labor. The patient, a small woman, had been in labor twenty hours when I reached her. The midwife in attendance had given quinine in superabundance. Examination revealed L. O. A. position, os well dilated, pains severe but without expulsive power; patient nervous and hysterical. A tablet of atropine, gr. 1-500, was given, and in ten minutes the character of the pains changed and the head began to descend. In half an hour the dose was repeated, whereupon the pains became long and hard. A third dose was given when the head engaged the inferior strait and in a little over one and one-half hours after the first tablet she was delivered of an 11 1-2-pound boy.

Case 5. Mrs. J. G., aged 18, primipara, short and slender of stature and coming from a family noted for hard labors. Labor moved on satisfactorily under atropine until the occiput had rotated well under the arch, when the pains failed, and fearing possible internal hemorrhage, 30 minims of fluid extract of ergot were administered, with successful issue.

Many more cases of like character could be given to illustrate the oxytocic power of

atropine, but this is enough to set other observers at work along the same line.

The thing to do is to report its failures and if possible the reason why it fails to provoke contractions.

Atropine in Menorrhagia and Metrorrhagia

As a hemostatic I have given atropine in a number of cases of menorrhagia and metrorrhagia with favorable results in each case. I do not know how many times I have used it in those cases as I never thought of keeping a record.

One patient approaching the climacteric kept the tablets for use whenever the flow appeared, and generally had to take but two and lie down awhile and then got up and went about her business. Another was always obliged to go to bed a week, when I gave her atropine tablets, with the result that she did not have to lie down any more during her periods. A third had been sterile from excessive flow for several years, got well under atropine and will be confined in January with her seventh increase.

I have used atropine also in hemoptysis, stopping the bleeding in a short time.

Atropine Is Not an Infallible Remedy

Much as I prize atropine in the second stage of labor I doubt its infallibility, and I want to say that my past experience with ergot has not borne out the hard-and-fast rule that it should not be given while the child is yet in the womb or in the strait.

I remember a case some years ago in which the placenta detached and came down with the fetus, and the head was in the hollow of the sacrum before I discovered the accident. To say that I was scared is to put it mildly. The pains were miserably inefficient and I was face to face with death from internal hemorrhage. I flew to my forceps, and, without paying any attention to asepsis or antisepsis, adjusted them as quickly as possible, but the miserable things would slip around that placenta and slip off every time I pulled. At last common sense came to my rescue and I gave two teaspoonfuls of fluid extract of ergot, this setting up violent contractions which forced the child ahead of the placenta and it was safely delivered. The mother made an uneventful recovery.

Since that time I pay no attention to hard-and-fast rules when the emergency calls for their violation. I did not then know the value of atropine and do not know now whether I could use it in such a case; I probably should do so but should have my ergot handy because that helped before. We may as well make up our minds that there are no inflexible rules in the practice of medicine.

THERE is something solid and doughty in the man that can rise from defeat, the stuff of which victories are made in due time, when we are able to choose our position better, and the sun is at our back.—James Russell Lowell.

Lessons in Hot-Air Therapy

Lesson three, outlining the indications and the contraindications for hot-air treatment, especially in joint tuberculosis, and giving additional facts concerning the technic to be employed

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LESSON III

IN Lesson II of this series, published in the July number of CLINICAL MEDICINE, I stated, when treating of the indications for hot-air hyperemia, that the treatment of pleurisy by hot air appeared to me to be rationally indicated, though no clinical observations of this treatment has as yet been published. In this I was in error, as I find that an article was published, in 1901, by Dr. H. J. Burwash of Chicago, entitled, "Superheated Dry Air in the Treatment of Acute Localized Inflammation and Septic Diseases; Including Pneumonia, Pleurisy, Appendicitis and Osteomyelitis."

The Treatment of Pleurisy

The clinical observations made by Burwash (I think his paper was read before the Chicago Medical Society in November, 1901) have a confirmatory bearing on the rational indication of this means of cure in pleurisy. He treated several cases of acute plastic pleurisy, and in no case did it take more than five treatments to effect a cure, with complete absorption of the plastic matter and normal respiratory murmur restored. In two cases, with a temperature of 101° F. and so much pain that respiration was exceedingly difficult, two treatments gave complete relief. One swallow doesn't make a summer, but it seems as if the hot-air treatment of pleurisy is worthy of an extended clinical investigation.

Another writer, Skinner, from clinical experience, recommends this treatment for pleurisy. However, he has fallen into error in advising hot-air treatment in joint tuberculosis; and this mistake weakens him as authority. In his book, "Therapeutics of Dry Hot Air" (p. 151), he says: "The vast majority of synovial inflammations are due to one of four etiological factors, viz., trauma, rheumatism, gonorrhea or tuberculosis. The writer's experience with hot-air treatment in this affection has been confined principally to cases owing to the three first-mentioned causes, and it has been eminently satisfactory. Walton has reported most excellent results in tubercular synovitis, and the physiological action of the measure would lead us to believe that it would render us valuable assistance in managing this discouraging disease. It has been said that hot air is contraindicated in joint tuberculosis, but this statement is fallacious and is not warranted by the pathology of the condition, the physiological action of the agent, or clinical experience."

What of Hot-Air Treatment of Joint Tuberculosis?

Skinner is not alone in this blunder of recommending hot-air treatment for joint tuberculosis. In "A System of Physiologic Therapeutics" (edited by Dr. S. Solis Cohen, and published by P. Blakiston's Son, 1902), on p. 127 of vol. ix, the following is said on the indication for hot-air treatment: "Rheumatism and arthritic processes, diseases of the muscles and tendons, neuralgia (sciatica) occupy the foremost position in this connection. The treatment of gonorrheal and *tubercular joint affections*, in accordance with the suggestion of Bier to utilize the influence of hyperemia, should be mentioned. Further, local overheating is useful in the treatment of chronic, ulcerative affections of the skin on account of the favorable influence exerted upon regeneration of tissue and cicatrization. (Ullmann

of Vienna.) On page 275 of this same volume the indications for hot-air treatment are given thus: "Subacute and chronic articular rheumatism, gout, traumatic arthritis, synovitis, tenosynovitis, fibrous anchylosis, rheumatoid arthritis, chronic leg ulcers, *joint tuberculosis* and sprains."

The One Important Contraindication

How this error crept into this important publication, furthermore quoting Bier as teaching it, is beyond explanation. Joint tuberculosis is the only important diseased condition of the joints in which hot-air treatment is contraindicated. Bier—and he is the great authority on the whole subject of hyperemia—writes in the sixth, and latest, edition of his book, "Hyperaemie als Heilmittel" (published by Vogel, Leipzig, 1907): "My opinion is that only passive hyperemia should be employed in the treatment of joint tuberculosis. I hold that strong active hyperemia, as I have said repeatedly, is directly harmful for this affection. I have, on the whole, only seen injury done by it." (Page 251 of Bier's book.) I have gone into this matter quite thoroughly, for it seems to me to be quite as important for a writer to recognize and label error as to teach truth.

The Technic to Be Employed

In the last lesson I promised to write of the technic employed in giving the hot-air treatment. The apparatus here described is a modification of that of Bier. In it, as in the original, hot air is employed with a temperature up to 230° F. Higher temperatures can be attained in this apparatus, but as the skin cannot tolerate a temperature higher than this, it is not attempted. Some writers speak of applying therapeutically air heated to 350 degrees. In these cases it will be noted that the limb treated is swathed in toweling, preventing the superheated air from getting at the skin. Another point to note is that the thermometer in the apparatus used is directly over the source of heat and undoubtedly registers a temperature higher than that of the air in that part of the apparatus in which the part is treated.

Bier advises that the hot air should have direct access to the bare skin of the part treated. Also that the sensations of the patient are the best guide to the degree of temperature to be employed in a given case. If painful sensations are experienced, the temperature of the hot air supplied should be lowered.

The apparatus devised by Bier for hot-air treatment consists of wooden boxes that serve as hot-air chambers about the parts treated. There are eleven such boxes listed, the total cost of the apparatus being $98.85. A modification of this apparatus may also be had. Collapsible chambers made of strong denham, adjusted to the various parts of the body, take the place of the wooden boxes. The whole apparatus can be readily packed into a box of convenient dimensions, making it readily portable to the patient's home. This is a great convenience, as the nature of the case frequently calls for the application of the treatment there. This apparatus is made by the Lister Company, Boston, and is sold for ten dollars. The price is almost philanthropic.

The fuel used is denatured alcohol, now sold at a low price throughout the country. The degree of heat is regulated by a lever controlling the size of the flame. An hour's application of the treatment once in twenty-four hours should not be exceeded. Sometimes it is advisable to give two treatments in the day, each of a half-hour's duration, as will be indicated further in these lessons.

Suggestions to the Expectant Mother

An epitomization of the things which the expectant mother ought to know about pregnancy, the confinement, the after-care and the nurse. Just the facts that you should put in the hands of your patients

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A NUMBER of books have been issued by publishing houses for the purpose of giving information to the expectant mother. A perusal of these volumes however shows them to be compilations giving information on so many subjects that their real value becomes questionable because of the number of things they attempt to teach. A little learning is a dangerous thing, and when any one book attempts to comprehend anatomy, physiology, hygiene, dressmaking, dietetics, the treatment of diseases of women and children, directions for having your own drugstore at home, first aid to the injured, etc., etc., the value of such a volume becomes very questionable.

Frequently, also, these books are written to exploit some particular fad or because someone has an ax to grind. A number of things, however, should be known by every young mother, and the necessary facts can be presented most concisely. The following suggestions have appealed to others and have been found useful in many families. The suggestions are divided into three periods, covering the pregnancy, the confinement and the after-care.

Suggestions for Pregnancy

A confinement in a normal woman is a true physiologic process offering few or no dangers, if certain simple conditions are complied with.

Women bore children before physicians were thought of; yet the presence of a physician at this time and his advice beforehand has been the means of reducing the dangers and complications of this event from fifteen percent to a fraction of one percent.

The care of a pregnant woman demands the same skill and knowledge that is demanded in a serious surgical case, differing in the fact that the former risks the lives of more than one person.

Dirt produces inflammation because it always contains disease-producing bacteria and germs. Cleanliness therefore is necessary above all things in anticipating a complete recovery from the lying-in period.

The majority of complications arising at this time could be prevented, or if anticipated, treated with better skill if known before they occur, hence the necessity of a physician finding out everything possible to be determined by previous examinations.

The position of the child, the size of the child and of the mother's birth-canal; the condition of the bowels and especially the condition of the kidneys should all be known by the eighth month of pregnancy and any signs or symptoms of constipation or kidney trouble attended to as soon as it is noticed.

Urinary examinations should be made soon after conception has occurred, and as frequently thereafter as the physician deems necessary.

Food fads are a fake. Eat, drink and live as near nature as our weakening civilization permits. The kidneys have much extra work to do, so increased water drinking is very essential.

A confinement is not a sickness: it is as much an event to be thought of with pleasure as the opening of a flower or the growth of the fruit on a tree.

Regular hours for sleep, meals and exercise should be provided. *Standing on the feet doing housework is not exercise.* Walking in the open air is the best manner to keep all forms of bodily activity in their best working order.

A properly fitting abdominal supporter will give certain women a great amount of relief for some of the aches and pains complained of in the latter months of pregnancy. There is no objection to wearing a corset provided the corset is a suitable one. The average corset, however, is an abomination and source of danger.

Clothing should be such that its weight is borne by the shoulders. Heavy skirts held up by the waistbands press the abdominal organs downward and cause displacement and congestion in the pelvic organs. The stockings should also be held up by other means than round garters. The garter obstructs the circulation in the limbs and produces congestion and swelling, resulting in varicose veins and ruptured blood-vessels.

Morning sickness is a condition that is very common and generally of reflex nervous origin. If it is mild in character no special treatment is required. Should it be continuous, it may require various measures to overcome its ill effects. Sometimes it lasts during the entire pregnancy, yet commonly it disappears in a few weeks.

The breasts should be carefully bathed and massaged daily after the seventh month. The nipples, if small or flat, should be carefully drawn out and manipulated by bathing them with some lotion that will overcome the usual tenderness and prepare them for the new work they will be called upon to do.

The socalled ointments and applications to the abdomen that are sold to facilitate labor are a source of considerable income to the manufacturers. Their only virtue is the massage that is administered during their application and the mental relief that is experienced in the hope that "there's something in it." Any good oil will answer the purpose of a lubricant and be as effective in every way.

Where the doctor carries a rubber obstetric cushion, there should be no soiling of the bed or linen. A large bath towel or folded sheet placed in this absorbs all the water and blood and is not infrequently all that is soiled.

"Settling pains" may occur for several days before actual labor begins. Actual labor-pains are regular, harder and increase in frequency. Settling pains seldom go into the back, while labor-pains are always referred there. When labor is imminent the bowels are to be thoroughly cleaned out by a cathartic, and when labor has begun the lower bowel should be washed out with a high injection. The latter should be repeated if in six hours the labor is not in a terminal stage. If hot water is used it will give considerable relief from pain because of its relaxing effects.

The bed should be protected by a waterproof covering over the mattress and the bed dressed double with a paper pad under each sheet. The dressing of the bed for a confinement and the first twenty-four hours after can be done as follows: mattress, oilcloth, comfort, paper pad, sheet, paper pad, sheet, paper pad.

The doctor's cushion is placed on the top paper pad; after the confinement and when the mother is properly attended to, the top pad is removed. This leaves a clean sheet and a pad which may be soiled during the first twenty-four hours from the natural flow that occurs. This top sheet and pad can be removed, leaving a second clean sheet and pad underneath and with much less work than to make up the bed as is customarily done.

The depressing effect of the emotions produces a marked influence on the duration and severity of the labor. It also tends to affect the nervous organism of the child. *The more patient and less demonstrative the mother is at this time, the quieter and less troublesome the child will be to care for afterward.*

Pulling and tugging and the excessive straining indulged in by many is not only useless and unnecessary but even dangerous. If there is any obstruction to normal delivery it is the doctor's place to relieve it. If there is none, then the greater quiet and the more relaxation that is secured, the more will it ultimately hasten an uncomplicated delivery.

Delivery is accomplished by the slow progressive contractions of the womb forcing the child down through the birth-canal. This action of the womb is involuntary and

independent of all other muscle action. The action of the abdominal muscles assists in a manner, but only comparatively little. The use of the voluntary muscles should be saved until labor is well established, allowing the uterine contractions alone to do the work required in the early stages.

To hurry things in a confinement case is to run many risks that are prone to cause serious complications. A physician should be paid for extra time as well as for service, and one reason for many accidents is the prevailing low obstetric fees. The doctor who cannot afford to be patient and hurries a tedious case because of other work has no right to attend obstetric cases. If he charges for detention services, he can afford to wait as long as nature demands.

True labor usually lasts six hours and the doctor can profitably be in attendance during all of this time. His suggestions and assurance are worth much to the mother. Customarily where the doctor can be reached in a half hour it is safe to call him when the pains occur regularly every ten minutes. The nearer the termination of labor the more frequent the pains. During the latter part of the labor it is a satisfaction to know that we have several means of relieving pain and making the delivery of the child a thing not to be dreaded or thought of with regret.

After-care of the Mother

A new mother is not or should not be an invalid. She should be protected and taught how to get strong again in the quickest possible manner.

It was a common thing for the grandmother to do again all her housework after the third day. The granddaughter lives in a flat or on a place of city-lot dimensions—the grandmother had a quarter section to help cultivate, and on this she cultivated physical strength and resistance to disease at the same time—hence the difference.

"The most frequent and at the same time the most preventable errors in the management of puerperal patients are: the failure to recognize and repair lacerations; an imperfect antiseptic technic; *the custom of keeping the patient upon her back for several days or longer after delivery;* the use of a tight bandage; and getting up too early after confinement." (Ashton.)

Strength is dissipated more rapidly by lying in bed than by any other method. It is associated with a rapid reduction in blood pressure. These two factors should not be overlooked and unless prevented by complications, the new mother will be all the better off if she can get up to attend to nature's demands, and sit up every day for a short time at least.

"A week in bed makes an invalid for a month" is true in that it affects the physical strength and the blood pressure, and this latter reduces the milk supply. Three weeks in bed makes a hungry baby for three months.

"The custom of keeping a puerperal patient upon her back for an indefinite time after labor is a pernicious and unreasonable practice. In the dorsal recumbent posture the heavy uterus must of necessity fall backward and downward, its ligaments being put upon the stretch and the pelvic circulation more or less obstructed. Furthermore, the lochial discharge collects in the vaginal cul-de-sac, forming a stagnant pool which interferes with free drainage and increases the dangers of sepsis." (Ashton.)

What is demanded of the mother is that complete rest which will allow the uterus to return to its former condition. This requires six to eight weeks, and during this entire time the mother should be protected from all severe physical and mental strain.

The Nurse

The question of a nurse is one that should be carefully considered. Little may be required of her, yet much may be demanded. She should be thoroughly clean in every way. She should not be overworked and should be given her regular hours for sleep or given opportunity for rest if her regular rest has been disturbed.

Never employ a nurse for an obstetric case, unless that nurse is a lover of children and babies. The baby will require more "mothering" than "nursing"—neither it (or they) nor the mother are invalids, but they

"want what they want when they want it."

Also remember that the milk proposition is largely a dairy question—"there's everything in the breed."

Prepared foods differ so greatly in their composition that a number may be tried before getting one that is suitable.

Should artificial feeding be necessary, an analysis is of the mother's milk and daily observations of the baby by the physician is the only certain method of finding out quickly the proper food required.

Although there is no direct communication by nerve-endings between mother and child, it is not to be denied that children are "marked" and "marred" by the mental disturbances of the mother.

To deny this is to deny the possibilities of wireless telegraphy, telepathy, thought transferance and other unexplained immediate phenomena.

The importance of this is to avoid those physical or mental disturbances not only during the pregnancy, but through the early years of child training and growth.

The Therapeutics of Calcium Sulphide*

This remarkable paper, which is reprinted from "The Medical Record", gives the results of one of the most exhaustive and convincing series of clinical tests ever made of this remedy, which the author finds practically specific in certain bacterial infections and contagious diseases

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WHERE physicians are few and surgeons fewer, where civil hospitals are limited to the mission hospitals and operating surgeons to the one missionary physician, and no other is within from eight to fifteen days' journey, and assistants are none but uneducated natives who have never been beyond the confines of their own city, anything that can lessen the need of surgical interference or relieve the surgeon of the responsibility of major operations in purulent cases is most welcome. And where people have never heard of a microbe and know nothing of asepsis, infection or segregation, any remedy which will destroy infection and act as a prophylactic against contagious diseases is a boon. A perusal of books on materia medica and therapeutics must impress one with the fewness of known positive remedies and the multiplicity of drugs of which we know little.

Calcium sulphide seems to be one of the drugs of which leading authors know or believe little. To us in our isolated Mission Station it has proven of untold value, and we believe a knowledge of our experience may help to establish the efficiency of a much-neglected drug and furnish a remedy for diseases heretofore beyond our control.

At the risk of arousing antagonism and incredulity at the outset, but with the hope of fixing attention, I purpose to make first a bold statement of what we believe to be facts and then to follow it with case-reports and illustrations showing what has led to these conclusions.

There may naturally arise a question as to credentials when anyone presumes to speak authoritatively. My own use of calcium sulphide dates back to 1894, when under the advice of Dr. A. M. Wilson of Kansas City, Mo., I prescribed it in cases of purulent otitis media and furunculosis. In these cases it worked like a charm, as it did also in series of carbuncles on my own neck, one of which

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with thirteen openings had already run six weeks after free incisions and touching with phenol, and appeared likely to continue indefinitely. A few days of calcium sulphide stopped the discharge and dried up the other foci around it.

Our field of labor for the last ten and one-half years has been in eastern Turkey, between five and six hundred miles south of the Black Sea, and for the past nine years at Van, a city of about 50,000 inhabitants, the ancient capital of Armenia, and situated at the same latitude and altitude as Colorado Springs and, fortuitously, with similar climatic conditions.

The district from which we draw our patients and in which we have the only civil hospital is larger than the state of New York and has a population probably in the neighborhood of two million. The immediate base for our observations is a hospital with 50 beds (where we have had more than 70 patients at one time), a dispensary with in- and out-patient departments, where we gave in 1907 more than 24,356 treatments and made 1,207 visits in homes; and in addition to these we have had the medical care of orphanages with more than 500 boys and girls as well as the oversight of schools with about 1000 scholars.

Having been unfortunately very much alone, we lack the corroborative testimony of other physicians, but my own observations and those of my dispensors and nurses persuade me that at least in Van and probably anywhere else the following is true, viz.:

1. Calcium sulphide will disinfect and bring about absorption of even large quantities of pus and will prevent pus formation. For some reason, possibly nonabsorption or age of drug, it is not always specific.

2. Calcium sulphide appears to be a specific cure and contrainfectant as well as prophylactic in typhus exanthematosus, variously known as famine-fever, prison-fever, and ship-fever.

3. Calcium sulphide appears to be an efficient prophylactic for scarlet-fever and distinctly modifies scarlet-fever and measles.

4. It prevents pustulation, pitting, and secondary fever in smallpox, very decidedly shortens the disease, and appears to lessen if not entirely destroy the contagion, and also to act as an efficient prophylactic in the absence of vaccination.

In the beginning, perhaps I should say, it has always been our rule to evacuate pus wherever we found it. Sometimes, however, this is not feasible.

Now let me give a few cases in illustration of these points.

Suppuration.— Case 1. A. S., female, aged 26, married, debilitated, mother died of tuberculosis. In ill health several years. Suspicion of miscarriage. Severe pain in left inguinal region for several days and growing worse. Frequent sweats, chills and fever. Examination revealed what appeared to be an abscess of the left fallopian tube about three inches in diameter. Family refused immediate operation and entreated that medical means be used. Prescribed calcium sulphide, one-half grain, every two hours. This caused vomiting and so was reduced to one-quarter grain every two hours, which was well borne. Within twenty-four hours improvement was marked, pains steadily decreased and symptoms of pus absorption subsided. The tumor gradually contracted and in two weeks had disappeared.

Profiting by this experience, I have tried the same treatment in many similar cases with gratifying results. In the succeeding five cases I tried it with fear and trembling, but seeing recovery where experience told us that the knife or death was the only alternative, I have gained confidence and now for five years have made it almost a routine practice.

Case 2. G. K., male, 47 years old. Periosteal abscess of left shoulder with caries of acromion process and pus burrowing in several directions. Operation performed and apparently all necrosed bone removed. Patient did well for two weeks, but when about to leave the hospital another abscess formed which discharged about 210 Cc. of pus daily from under the scapula. Irrigations and injections of iodoform emulsion, ether-iodoform, and other things seemed only to increase the pus discharge. Calcium sulphide in one-fourth-grain doses was given

first hourly, then every half hour, but the pus increased rather than diminished till we gave half a grain every half hour throughout the twenty-four, and then the pus ceased as if by magic; the sinuses closed and the patient was well in a week and has continued so for three years.

Case 3. Victoria —, girl, age 12; tuberculosis. Had severe pain in the lower abdomen and especially in the vagina; there was a large indurated mass surrounding the rectum, very painful to the touch, but fluctuation was not perceptible; pus temperature, rapid emaciation, anorexia, and inability to retain any but small quantities of food. Calcium sulphide was badly tolerated and frequently caused vomiting in 1-4 grain doses every two hours, but the symptoms were slightly ameliorated for a few days, followed by septic peritonitis and death in a few hours. Autopsy revealed a 1 1-2 pint cavity of foul-smelling necrosed tissue back of the rectum and burrowing into the sacrum; very thick inflammatory wall about the rectum and vagina. This patient was not materially helped by calcium sulphide.

Case 4, being in the hospital at the same time, with identical symptoms, minus tuberculosis, an operation was performed and the cavity drained through the vagina. Patient was discharged apparently cured, but returned in seven weeks with a recurrence of the symptoms. Calcium sulphide, 1-2 grain, was administered every half hour when awake, and, as saturation showed, was reduced to 1-4 and then 1-6 grain every two hours for two weeks. The patient was emaciated and the appetite was poor, but even 1-2 grain every half hour did not affect the stomach. Recovery was uneventful and no recurrence in one and one-half years.

Turkey, in common with other parts of the world, was afflicted last year with the grip accompanied in many cases by otitis media and subsequent otorrhea. When we used calcium sulphide, the ear symptoms subsided rapidly and there was no pus discharge, whereas severe pain and purulent discharge was very general among those who did not use calcium sulphide. Did time permit, I could cite dozens of cases of otitis media, of localized empyema, furunculosis, appendicular abscess, and perityphlitis apparently demanding the knife but cured by calcium sulphide. I might also cite a number of cases in which it was given as high as 1 grain every half hour with apparently no beneficial results.

Typhus.—Four years ago, as a result of starvation and overcrowding, typhus exanthematosus, variously known as famine-, ship-, or prison-fever, broke out in very virulent form in Van and spread with alarming rapidity, carrying off the rich as well as poor. One of our much-beloved foreign associates and one of our leading native teachers as well as some orphans and many in the city outside of our premises succumbed to the disease. The poor were herded four or five families in a room with earth floor, insufficient fuel, almost no windows, and these and the doors kept tightly closed because of severe cold. Many had been living for months on bread made of the bran and the dirt sifted from the soldiers' flour, or the husks of linseed left from the oil-press, and some on bread made of ground grape-seeds and skins left from the wine press. I have visited rooms with as many as fifteen individuals lying sick on the floor, and known as many as four deaths a day from one house. Our Mission Circle lost one member and our boys' school a valued teacher. The disease got into our orphanage with about 450 boys and girls. Our hospital was crowded with typhus-cases of a severe type.

From my books on therapeutics and practice, Wood and Fitz, Hare, Quain, and others, I could get little more help than "treat the symptoms as they arise," "there is no known remedy which distinctly modifies the disease"—and this from the best of authors.

Too late to save a dearly loved friend who had developed thrombosis and abscess in the brain, in the agony that comes to every true physician at some time and especially to one compelled to care for his own loved ones when all his skill proves vain, I sought the source of all wisdom, The Great Phy-

sician, and it seemed as if a voice spoke: "Use calcium sulphide."

I went to the hospital, where several patients were apparently near death; others had just been brought in; one of the nurses had contracted the disease. Three patients in dying condition were selected and given calcium sulphide, 1-4 grain every two hours, and in less than twenty-four hours the fever was gone and the patients were convalescent. For some days other lines of treatment were continued with other patients without marked improvement. Then calcium sulphide was given to five patients in various stages of the disease with the same result as the first three.

After this it became routine to give calcium sulphide to every typhus patient, both in the hospital and in private practice. There were hundreds of cases in which to test it. Soon it became apparent that in houses where patients used calcium sulphide no others contracted the disease. In the hospital, where we had only between forty and fifty beds, we were compelled to put typhus patients alongside typhoid, pneumonia, pleurisy, malaria, and surgical cases. The same few nurses had to care for all. We have no contagious disease hospital.

One-quarter of a grain of calcium sulphide given three times daily proved an efficient prophylactic. With the exception of a night nurse mentioned above and the superintendent, neither of whom took calcium sulphide as a prophylactic, no one in the hospital contracted the disease. The superintendent began taking calcium sulphide the third day of her disease, with a temperature of 106.5°F., and in twenty-four hours her temperature was normal. So far as known but two patients succumbed after using the drug and they both began taking it when in a dying condition, with severe lung and bowel complications. Hence calcium sulphide appears to be as near a specific for typhus exanthematosus in Van as can be looked for, and we hope climatic conditions elsewhere will not be found to modify its results.

Scarlet-Fever.—In the summer and fall of 1906, an unusually severe epidemic of scarlet-fever swept over Van and its neighborhood, having progressed southward during a period of eighteen months from Erzroom. The disease had been unknown in Van for twenty-three years, hence susceptibles were many and immunes few. It was estimated that from 12,000 to 20,000 cases occurred and from 1200 to 2000 deaths or more. Moslems carefully concealing their death-records and depending on "kismet" for treatment, their graves were many. We managed to keep the disease out of our orphanages and homes till October, when it began in a most virulent form, carrying off two of our older boys within thirty-six hours. Then our oldest daughter was taken sick. After the usual incubation period, six or seven more boys took sick.

Then the idea to test the calcium sulphide occurred to me and I ordered my pharmacist to make 3000 1-4 grain pills and give them to the orphans three times daily, the larger boys or company leaders to be responsible for their companies of forty. Five companies remained free for three weeks, but the sixth company had case after case, between fifteen and twenty attacks occurring in that one company of forty boys while others remained immune. Investigation developed the fact that the company leader had refused to give his boys the pills. They were compelled to take them, and the epidemic stopped in that company. A little later about forty mild cases broke out among the other boys who had taken calcium sulphide for about one week, three weeks previously, and twenty or more girls in the girls' orphanage developed scarlatinal sore throat. Persistent calcium sulphide treatment all around stamped out the epidemic and greatly modified the disease in those who had it.

Of our 450 children none had even been exposed to the disease before this epidemic. Presumably, and judging from the epidemic in the city outside of our premises, four-fifths were susceptible, whereas less than one-sixth of our orphans contracted the disease and most of these had no symptoms other than sore throat and desquamation. Three boys who showed no symptoms developed scarlatinal nephritis and albuminuria, which was the cause of the majority of deaths in the

city. Spirit of turpentine proved our best remedy for the albuminuria. When our supply gave out, we used the oil of turpentine with the same good results; 3 to 9 drops t. i. d. in milk. The same prophylactic value of calcium sulphide was proven in the homes about us. ["Spirit"=the refined oil.—Ed.]

Smallpox.—November 3, 1907, a girl was brought to the hospital from the German orphanage well broken out with variola just passing from the umbilicated vesicular to the pustular stage; a fairly thick eruption but discrete. Pustulation and secondary fever had begun before saturation with calcium sulphide was complete, but then ceased immediately. Less than a fourth of the vesicles pustulated, secondary fever subsided in a few hours, and in four days (November 7) the patient was sitting up asking to go back to school.

November 8 the superintendent of the German orphanage wrote me that she thought that one of the girls had scarlet-fever. I saw her some hours later lying in a small room with five other girls, two of whom had pleurisy, one incipient pneumonia, and two malaria. One of them had had smallpox, none of the others had even been vaccinated. This girl with supposed scarlet-fever was well broken out with confluent vesicular variola. She was removed at once to the hospital, saturated with calcium sulphide, and given daily antiseptic (sulphonaphthol) baths, as is our custom. There was no pustulation, no pitting in either case, and in the confluent case no secondary fever. The five exposed girls were given calcium sulphide and none of them developed the disease, though two other girls in the orphanage, not so much exposed, did develop it.

We have had dozens of cases to treat in their homes; and even where red curtains were not used, but calcium sulphide was, there has been no pitting. The nurse who cared for our smallpox cases had not been vaccinated nor had had smallpox. We had no vacine and are 1000 miles horseback travel from the nearest supply. The only safeguard for our nurse was 1-4 grain calcium sulphide every three hours. She and many others not otherwise protected did not contract the disease though much exposed. This of course proved nothing, but strongly suggests the possibility of calcium sulphide being a prophylactic for variola and kindred diseases, and valuable where vaccine is not obtainable.

Calcium Sulphide an Effective Internal Prophylactic

In conclusion I would say, the case-reports herewith given are mostly of adults. I have found children sometimes requiring fully as large doses as the most resistant adults and tolerating them perfectly; and I have found other children of the same age respond to even 1-20 grain every two or three hours.

I believe that the efficiency of calcium sulphide in pus-cases is due to sulphureted hydrogen liberated in the blood and acting as a germicide; hence the preparation used should be fresh and strong in that element. It loses its effect if left open to evaporate its odor. Many of the preparations on the market seem worthless.

The dose varies according to the patient and seems more dependent upon constitution than upon age or body-weight. Our rule is, small doses frequently repeated to effect, then enough to continue effect. The physiological effect of calcium-sulphide saturation is the odor of sulphureted hydrogen from the skin and breath, not belching from the stomach.

Typhus exanthematosus is practically unknown here, but frequent in Europe and Asia. With the hospital facilities and surgical skill throughout America, purulent conditions may not trouble you as they do us, but scarlet-fever and smallpox terrorize a large portion of the population of America and cost both federal and municipal governments large sums for quarantine and care, to say nothing of the disturbance of business and loss of valuable lives.

Calcium sulphide merits the most careful and thorough study by every practitioner and student in the land.

Therapeutic Mechanism

The body is a complicated machine, requiring for its maintenance in health, and repair in disease, the services of men who have all the attributes of the skilful engineer—the trained eye, the practised ear, the alert judgment

By ROBERT GRAY, M. D., Pichucalco, Chiapas, Mexico

PRACTICAL clinicians have been and should ever be anatomical students. We who pretend to practise the noble and ennobling profession of medicine should realize and understand that our legitimate functions are those of a skilful engineer, with attributes qualifying us to detect at a glance and repair promptly any derangement or disorder of the complicated machinery over which we so often exercise dominating responsibility—the delicate, marvelous anatomical labyrinth of mankind.

In the mammoth manufacturing establishments a little grit in a bearing, a hot box, a loose nut on a screw, a slipping belt—any of these—may cause material damage in a little time, and tear an important feather from the cap of the engineer or machinist who permits such disaster. For these reasons the trained ear, the practised eye of responsibility, ever on the alert, almost instantly detect the slightest discord of lacking harmony, and know where to locate the jar.

The Human Machine Demands the Utmost Skill

Are our human machines less vitally important that we should not be equally expert and proficient in their manupulation? Yet we are deplorably prone to stray far into the devious paths of fads and theory in profound and benighted ignorance of the sublime erudition or intuition, it little matters which, whose practical simplicity should render us masters of what we profess.

I know, and a hundred thousand other English-speaking physicians have found that our alma mater left us at sea without pilot, compass or rudder, as to proper practical instruction anent our imperative duty in the treatment of disordered anatomical mechanism. Diagnosing by square-and-compass rule is sheer nonsense, in any critical emergency (and by laboratory auxiliary practically impossible in most rural domiciles), which is not seldom misleading where readily available. One should recognize the fountain source of the trouble and attack it heroically with proper weapons, thus saving the situation ere any dilatory red-tape process could get ready to act in an uncertain and a feebly inefficient method of medication.

Intestinal Engorgement and Vascular Congestion Primal Causes of Disease

It is an established, irrefutable truism, as infallible as the polar needle, that any acute attack is due to engorgement or congestion, usually both. By engorgement, in this connection, I mean to imply suspended functions of alimentary rather than sanguineous vessels, to the latter of which congestion refers; indigestion, constipation, costiveness being less forcefully expressive of the blockade of the *primæ viæ.*

Under the presumption that such are our ambushed enemy, before any clearly diagnosible disease has developed, we should thus begin the battle vigorously by the alimentary canal, rectum, and the vascular highways and byways. When such processes are prompt and ample, we seldom know what the aborted embryo might have gestated, and our patients are well without the debilitating course of protracted fever and dilatory medication. This naturally applies where the doctor is timely called at the inception of physical disturbance, ere the well definable and more alarming symptoms appear.

Enemas highly charged with epsom salt and apomorphine (hypodermically or per

rectum) emesis after the evacuation of the saline clyster, seldom fail to relieve alimentary distress, and which in many instances should be followed by a proper purgative. I employ podophyllin compound, followed by an emulsion composed of castor oil, parts 4, olive oil, parts 2, lemon juice, part 1, to which is added sodium chloride, 5 to 30 grains, according to age, infant or adult. (By the way, *the emulsion alone* is the very best yellow-fever and dysentery purge.)

Glonoin, cactin and strychnine arsenate do the turn nicely, whether the congestion be cardiac, vascular, arterial, or all of these combined.

This the Treatment at the Eleventh Hour

When we are called at even the lamentable eleventh hour, to meet pneumonia, typhoid or pernicious fever, well developed along the lethal turn, we may as well realize, and acquiesce in it, that the conditions above hinted at prevailed at first and continue in a more aggravated, high degree, while the acute stage has been apparently dominated by more serious complications. Hence the same treatment should be promptly applied; sometimes omitting the emesis when there seems to be danger that mucopus might be raised of density sufficient to cause suffocation—a frequent tropical peril in any grave lung or bronchial involvement, and sometimes proving fatal when vomiting is due to irritation without vomiting.

But purges and enemas should be pushed till normal intestinal cleanliness becomes practically reestablished, when zinc sulphocarbolate, salol, sodium borate or other effective disinfectant is freely administered. The febrile condition should be dominated by aconitine, veratrum viride or acetanilid, according to circumstances and conditions, the heart being strengthened by glonoin and sustained by cactin and strychnine arsenate. Fever once down to normal may usually be kept from recurring by judicious employment of quinine, a favorite practice with me.

It should be understood and remembered that in all inflammatory fevers the inflammation is arrested the moment the fever stops and cannot progress unless the temperature is above normal. Hence in pneumonia, pleurisy and typhoid fevers the vital desideratum and the prime secret of success are involved in the speedy reduction and prompt termination of fever. Secure and maintain normal temperature, and ninety-seven times in a hundred the undertaker will be left out in the cold.

It is irrational and utter nonsense to say that any fever must and will run a specific course. Remove the primary cause—alimentary or arterial obstruction, or both—reduce the fever to normal or subnormal and firmly hold it down to normal, and you will get a beautiful demonstration of the fallacy of that antiquated theory. In well-developed, rebellious cases of pleurisy and peritonitis I sometimes have a little trouble with the fever, yet not for a long time, as two to four days usually suffice to get it under permanent control.

To Cure the Tropical Fevers Is "No Child's Play"

When I refer to fever it is the Simon-pure tropical class, so near akin to yellow-Jack that ninety percent of the patients early develop vomiting, although that feature is not present at the inception, which many times is the case. A little reflection on the difficulties of such complication should satisfy any practician that to cure such fevers is no child's play. Usually I overcome the rebellion of the stomach with 1-2 grain of sulphocarbolate of zinc frequently repeated, and white of egg dissolved in strong lemonade.

Nevertheless sometimes all efforts fail and drive me to risk apomorphine emesis and to give medicine and alimentation per rectum. In such cases I break the fever with a clyster containing equal parts of quinine sulphate (dissolved) and antipyrin, this being the only employment I ever give the latter substance. No other medicine or clyster known to the profession will so effectively reduce fever, with none of the disagreeable after-effects of antipyrin when given by mouth—an application almost exclusive in my practice in the treatment of

children and patients with disordered stomachs.

Flaxseed poultices, with a modicum of tincture of opium and powdered camphor applied to the skin, and frequently changed, do good service in facial inflammations, while Dr. Burgess' panacea, a strong solution of epsom salt and phenol, applied with moistened cloths doubled several times and frequently repeated, seem to soothe pain; and old-fashioned oil of turpentine frictions, continued energetically till the skin begins to redden, this followed by doubled cloths as hot as can be tolerated and changed repeatedly, possess more merit than possibly everything else and outdistance antiphlogistine many degrees.

I have been getting beautiful results with the hyoscine, morphine and cactin combination in those delirious fevers mentioned above as well as in other difficulties. An able native physician called me in a case of suspended labor, so complicated that he hesitated about employing ergotin in sufficient dosage without a previous consultation. Upon my advice one of these tablets was administered at once, an application he had not thought of. In forty minutes the babe came, without forcible assistance, and the placenta in the same easy way a little later, all unknown to the mother, who continued to sleep on tranquilly for ten hours, awakening as refreshed as if from natural slumber.

The next day the same physician had to cut an abscess-formation covering the entire palm of the hand, the poor woman being in fearful agony. I suggested that he put the hyoscine-morphine in the cocaine solution he purposed injecting at several places, which he did; and the hand was no more than dressed hurriedly when she went to sleep and slept for eight hours. I have had a similar case and experience since then. In several minor surgical cases, usually treated under the influence of chloroform, I have had no trouble with the hyoscine-morphine combination alone.

I disliked and do not yet relish the morphine element of this preparation, but must tolerate it for want of a more desirable substitute of equally active virtue. Trional was my ideal; but my French chemical friends tell me that thus far it has been impracticable to secure an isolated concentration sufficiently reduced to be applicable in place of the minute fraction of morphine employed.

It may be, however, that my prejudice against morphine is unjustified as to this combination, the other substances possibly exercising a modifying influence over the pernicious properties of morphine. I have given hyoscine-morphine for twelve consecutive nights, the patient, a nervously hysterical woman, really suffering pain; she did not ask for the drug after being cured, the reposeful nights she passed under its influence notwithstanding.

Such experiences satisfy me that many practicians who are shy of the preparation for one or another of the reasons urged against it simply cheat themselves of an invaluable aid which nothing else known to the profession renders, and yet comparatively harmless.

Do Not Neglect Anything of Possible Value

In our capacity as anatomical engineers we should neither ignore nor neglect what will be most useful to our patients regardless of prejudicial judgment of the elect. Men who almost continuously labor, in the shambles of death amid pestilential havoc, learn some things rarely found between the two covers of any book but which would not be a discredit in the upper chambers of the brain of those most enviably endowed by fame.

It were idle to repeat here elaborately what I have frequently affirmed as to my staunch auxiliaries of active principles, namely, electricity and suggestion. Hence I will merely assure all my readers that I am becoming more and more comfirmed that no previous deduction was erroneous, and that the impossible is nonexistent ere the vital tissue receives the fatal seal from the finger of decay, before which the average moribund may be resuscitated, save such as are perishing from recent loss of blood or other violence inevitably fatal.

Effects of High-Frequency Currents on Gray Hair

The writer of this article has discovered a method of restoring the color to hair which is turning white, effective even in some cases due to advancing years. While this method is in the experimental stage, it gives promise of practical usefulness

By NOBLE M. EBERHART, A. M., M. S., M. D., Chicago, Illinois
Professor and Head of the Department of Electro-Therapy, Chicago College of Medicine and Surgery; Professor of High-Frequency and Vibration, Illinois School of Electrotherapeutics; Attending Surgeon, Frances E. Willard Hospital

AS early as 1902 I began using high-frequency currents, usually in connection with vibration, in the treatment of various conditions of the scalp where the hair was thin or falling out rapidly.

Vibration was employed because of its stimulating effects on the circulation, and high-frequency sparks because of this same beneficial influence on the nourishment of the hair-roots, and further on account of its germ-destroying action where bacteria were responsible for the falling hair.

The possibility that high-frequency currents might be useful in restoring the original color to gray hair did not occur to me, and had it done so I should have thought it impossible in consequence of the fact that these currents have been used commercially in bleaching flour and other substances. The bleaching effect, however, is due principally to the action of the ozone liberated, while in the case the sparks are applied to the scalp, the amount of ozone produced is trifling in comparison with the stimulating influence of the current.

Restoring Gray Hair—an Accidental Discovery

My first discovery of the "restorative" effect on gray hair came about in an accidental manner.

I was treating a woman whose hair was falling out very rapidly, employing both high-frequency current and vibration. Her hair was very black, but sprinkled over her head were three or four dozen gray hairs which were especially conspicuous by contrast. She asked me if it would do any harm to pull out the white hairs, and I told her that as long as she was losing so much hair, anyway, she might as well pull out the objectionable gray ones.

After about two months of treatment the hair had practically ceased falling out and I noticed that there were scarcely any gray hairs. I thought she had been pulling them out and said so. When she replied that she had been afraid to do this despite my permission, I said to her that the treatment must be restoring the color and proceeded to investigate. The finding of a few hairs white at the upper end and dark for a varying distance next the scalp convinced me absolutely that my surmise was correct. From that time on I have employed high-frequency currents in all of these cases that have come under my care.

For a long time I believed that only in prematurely gray hair any improvement could be expected, but a recent case makes me think that if patient and physician are sufficiently persevering, results may be obtained in many instances where the gray hair is the natural result of advancing years.

The Method Useful Even in Advancing Years

The case referred to is one in which I have for somewhat over a year and a half been treating a very stubborn case of lupus, situated behind the left ear. The patient, a man in the fifties, has gray hair which can scarcely be called premature.

The treatment for several months consisted in an application of high-frequency sparks six days a week, preceded every other day by exposure to the x-rays; and even now that the patient is nearly cured he is still receiving two such treatments a week.

Recently I noticed that around the ear where I had been applying the sparks there was a band of dark-brown hair about an inch in width. I thought possible this was so all around the margin of the hair, but found it did not exist except over the area receiving the high-frequency sparks, and a reference to a picture of the man taken when treatment was begun shows that at that time there was no apparent difference in the shade of the hair at this point.

How the Results Are Explained

All of this brings me to the conclusion that gray hair must be entirely a result of disturbed nutrition, preventing the carrying into the hair of the pigment that gives it its color. This pigment-carrying property, in all probability, depends largely upon the natural electrical currents which traverse various tissues and which when interfered with in the hair result in grayness.

In support of this theory I cite the well-known fact that the contraction of a fair-sized muscle has been shown by the galvanometer to develop one-half volt of electricity, and that in the cases of grayness treated by my method hairs can be found with the dark zone next the root and the white one on the end, showing the gradual advancement of the pigment stream.

Laying aside theory, results tell, and it is easy for anyone to prove the truth of my statements. The only drawback is the comparatively long time required. Some cases show results in two or three months, but six months is nearer the average.

In the case of naturally gray hair I fear few patients could be kept under treatment long enough, since in the instance cited, a year and a half elapsed before the change was noticed.

The method which I have employed is first to use a rubber brush or soft-rubber vacuum-cup on a vibrator and for three or four minutes thoroughly massage the scalp, stroking from the edge of the scalp inward toward the center of the crown of the head or else using short circular strokes and gradually passing from the margin to the center. Following this, a glass vacuum-tube attached to a high-frequency resonator is employed and passed rapidly back and forth over the scalp for five minutes, with as sharp a spark as the patient can conveniently tolerate. This is usually one about one-half or three-fourths of an inch in length. Too sharp a spark might make the scalp sore and even have a slight caustic effect, which is to be avoided.

Daily treatments are the best. I employ a similar technic in falling hair except that vibration is ordinarily used for a short time and occasionally entirely dispensed with.

NATURE herself must be our adviser; the path she chalks must be our walk: for so, while we confer with our eyes, and take our rise from meaner things to higher, we shall at length be received into her Closet-secrets.

—William Harvey

Hypertrichosis, or Hirsuties*

Superfluous hair, and the method of removing it successfully with the electric needle; with a full and detailed description of the technic employed by the writer

By MAY CUSHMAN RICE, M. D., Chicago, Illinois
Gynecologist and Clinician in the Illinois School of Electrotherapeutics; author of "Electricity in Gynecology"

UNDER the hair-root, in the deeper layer of the skin or in the cellular tissue beneath it, is situated the papilla. This body consists of round cells and its individual nerve and blood supply. Its function is the forming of the hair. The destruction of this papilla is sure death to the hair which grows from it.

Failure to recognize the anatomical construction of the papilla and its role in the growth of the hair is largely responsible for the great variety of injurious methods employed for its removal.

It is apparent that applications to the skin dissolve only the shaft, that part of the hair which projects from its surface; that they but slightly injure the hair-root, which is contained in its follicle within the skin; and that they leave unweakened the source of the trouble, the papilla, at its base.

It is impossible to destroy the papillæ, located from one- to three-sixteenths of an inch beneath the skin, either by chemicals or shaving. The common method of their destruction, the socalled "pulling out by the roots" by means of tweezers, adhesive plaster or pitch, is not only equally futile but actually strengthens the growth by causing an irritation of the papillary structure and the formation of new fibrous tissue.

No means of destroying the papillæ without decomposing the skin itself has been discovered, with the exception of the Roentgen-ray in occasional instances, and this often with resultant scarring.

Electrolysis, therefore, applied directly to the papillæ, is the only recognized rational treatment for this troublesome affection.

*Copyright applied for in the United States and Great Britain.

For the discovery of the process, as applied to the removal of superfluous hair, we are indebted to Dr. Michel of St. Louis; for its elaboration, to Drs. Hardaway and Hayes.

Hypertrichosis a Disease

Much would be gained if hypertrichosis were, by medical men, regarded in its true light, namely, an abnormality, to be corrected like any other disease.

To have this disease cured is too often spoken of as "beautifying oneself," while it merely is becoming normal, free from being a conspicuous, unsightly object.

The tendency on the part of the profession to demean the labor involved in the process of epilation by the electrolysis is to be deplored. The physician who skilfully eradicates superfluous hair from the face has as good reason to be proud of his work as has the surgeon who successfully operates upon hair-lips or other unsightly deformities.

Etiology of Polytrichia

One of the first questions asked by the patient with hair on her face invariably is, "What causes it?"

For centuries men have been trying to answer the simple question but it still remains unanswered.

One authority claims that it is always due to some uterine reflex, and this is perhaps the most commonly accepted opinion. Another writer considers it entirely a matter of heredity. And still another dismisses the subject by calling it a reversion to the masculine type.

Large numbers of my patients afflicted with superfluous hair are found to be suffering from pelvic disease in its various forms; yet

the fact that very few women are absolutely normal and that some of the worst-afflicted have been entirely free from such disease leads me to believe that the two conditions exist coincidently and that the one has no direct bearing upon the other.

That heredity is an important factor is evidenced by the fact that in a large percentage of cases one of the parents has had an excessive hairy growth and that frequently several persons in the same family have taken treatment for this affection.

Although hair upon the face gives a woman a masculine appearance, my observation lends positive assurance that it is no evidence of masculine character in a woman. The brunette is more prone to it than the blonde, yet no one is immune, "neither Jew nor Gentile, neither bond nor free."

Heredity and irritation are undoubtedly the prime factors in its development.

The patient first notices a tendency of her hairs to become coarse; she begins to pull them out, continually picks at them, rubs the face with the various creams and "skin-foods" on the market, resorts to medicaments such as peroxide and ammonia, and finally in desperation seeks relief by wholesale destruction with the depilatory so highly recommended by kind friends and advertising druggists. What is the result? Coarse hairs have been made coarser, and fine downy hairs have been developed into coarse ones.

Knowledge of Anatomy Essential to Skill in Electrolysis

In the minds of the laity the opinion is prevalent that anyone can learn in a short time how to remove superfluous hairs; that with a small battery and a little practice the simple art is mastered.

The fact that large numbers of uneducated persons enter this field as an easy means of making a subsistence accounts for the vast amount of poor work done, the scarred faces, the increased growth of hair in many cases, the consequent loss of faith in the value of all methods, and resultant neurasthenic condition of hosts of hopeless people.

It will be assumed that a knowledge of the specific anatomy obtains and that it is unnecessary to more than review the same here.

The hair is a modification of the skin, composed of shaft, root and papilla. The root is surrounded by two root-sheaths which cling closely to it. At the base of the hair-root is the papilla. The root of the hair is contained in the hair-follicle, formed of the deeper, or dermal, layer of the skin. The fibrous structure of the follicle and papilla are of practical importance in the selection of the proper needle.

Apparatus Required

1. A galvanic battery, the motive power of which may be either cells or street current.
2. Two conducting cords.
3. Needle-holder.
4. Needle.
5. Magnifying glass.
6. Epilation forceps.
7. Indifferent electrode or dispersing pad.
8. Anesthetizer.
9. Solution for anesthesia or dispersing pad.
10. Antiseptic solutions.

The Current.—We have available for electrolysis one current only, namely, the continuous, formerly called galvanic. This is utilized for epilation in an ideal way at the point of a very fine needle.

A milliampere-meter in connection with one's battery, although not absolutely necessary, has great advantages. It furnishes the only means of definitely measuring the current. This should be a shunt-meter, or at least a meter with coarse reading and so placed that it can easily be seen by the operator. The ordinary meter with fine reading is of little use when such small currents are to be used.

Conducting Cords.—Insulation of the conducting cords in specific colors, one color invariably being used for the indifferent electrode, or positive pole, and another one for the active electrode, or negative pole, will tend to prevent making mistakes in polarity.

Needle-holder.—A short, rather large needle-holder is more easily held in the hand, and is, therefore, preferable to the smaller, longer ones.

Needle.—The sharp-pointed needle, in favor with unskilled operators and responsible for many failures, has obvious disadvantages, as for example the ease with which it punctures the follicle and fails to reach the papilla, the small point for contact where best contact is essential, and larger size above the point where there should be the least possible effect of the current.

The Hayes bulbous-pointed needle has all of the requisites of a good needle for epilation. Made of steel, it can be ground in the right shape, namely, that of the hair-follicle, so that when passed into the follicle it conforms to the shape of the latter. Bulbous-pointed, it does not readily penetrate the fibrous wall of the follicle as does a sharp-pointed needle but naturally passes down to the papilla; it also affords a larger surface for contact with the latter. The large extremity, or shank, usually on the Hayes needle when purchased should be broken off with the fingers before putting the needle into the holder, leaving it about three-fourths of an inch long. These needles are made in different sizes, listed as coarse, medium and fine, the larger ones being used for coarse, the smaller ones for fine hairs. Needles are more easily ground coarse than fine; therefore it is quite difficult at times to secure the finer needles. Care should also be taken that the needles, though bulbous-pointed, are not so blunt as to enter the tissue with difficulty.

Insulation of Needles.—Were there a satisfactory method there would be advantages in insulating epilation-needles, but thus far all efforts at insulation have been disappointing. Hard rubber and shellac are the two materials available. That skill is necessary in the using of these upon the needles, and that they wear off rapidly, making it necessary to have several needles ready and to change frequently, is a serious objection.

In cases of extensive growth good insulation would tend to prevent scarring; yet with properly selected needles, the right amount of current and care, even with the needle uninsulated, an enormous number of hairs may be destroyed without leaving scars visible to the naked eye.

Magnifying Glass.—According to the preference of the operator, the magnifying glass may be attached to a head-band and worn around the head (Figure 1) or fastened

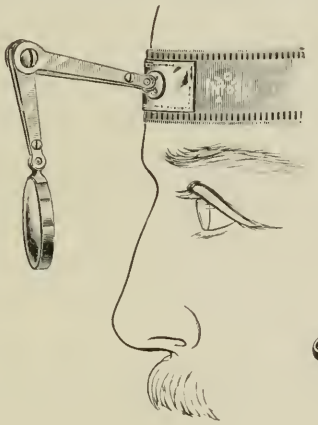


FIG. 1

FIG. 2

to the needle-holder, as in Figure 2. Though at first the operator sees better with the naked eye, after becoming accustomed to the glass, he finds it a necessity.

Epilation-forceps.—Epilation-forceps I use for short hairs only; long hairs are easily removed with the fingers. With the latter one is less liable to make traction than with the forceps, and there is the additional advantage of having one less thing to hold.

Indifferent Electrode.—The best indifferent electrode is a large, wet, cotton pad covered with rubber sheeting and placed upon the upper part of the dorsum. However, a spongiopiline electrode the size of the hand may be used. The patient lies upon the back and the pad is thus held in good contact. The pad (of my own devising) is made of absorbent cotton and table-padding, a thick cloth resembling felt and purchased at dry-goods houses.

The neck-pad is made as follows: From a pattern measuring four by six inches, with rounded edges, three layers of absorbent cotton and one of table-padding are cut. These are sewed together through and

through, lightly enough to hold the cotton in place, and are then covered with thick muslin or other cotton material. Two pieces of inch-tape are laid across to hold the metal electrode, and then the pad is bound with tape. The metal consists of a piece of block-tin an inch less in circumference than the cotton pad and it is slipped under the tapes after the pad has been wet. It is removed whenever the pad is boiled for sterilization. The advantages of this pad are apparent: they are made in various shapes and sizes, are exceedingly durable, and unlike the pads on the market, are easily sterilized.

(To be continued)

Carcinoma of the Uterus—Rare Form

A study of the histology of a rare form of carcinoma, which, while found in the fundus of the uterus, was evidently primarily seated in the portio vaginalis. The necessity for careful curetting

By HENEAGE GIBBES, M. D., C. M., L. R. C. P. (London), Detroit, Michigan

A PROMINENT physician of this city recently brought to me a microscopical slide labeled "Adenocarcinoma of the Uterus," with a request that I look it over and see if I agreed with the diagnosis. I went over the whole specimen very carefully, and informed the doctor that I did not agree with his diagnosis, and explained why.

The specimen showed a closely packed arrangement of cells on a basement-membrane, with very little stroma, forming irregular tubes; but in no part was there more than a single layer of cells on the membrana propria, or basement-membrane, this making it a simple hypertrophy of the uterine mucous membrane, or adenoma.

Such an arrangement of cells is always found in hypertrophy of the mucous membrane produced by some irritation, whereas in adenocarcinoma there are several layers of cells.

In malignant adenoma there is a new growth composed of a single layer of long columnar cells on a basement-membrane, but this form is confined to the cervical canal and is never found inside the internal os.

Having fully explained the conditions existing in the specimen and my reasons for disagreeing with the diagnosis, the doctor supplied some currettings from the patient, twelve in number, all very small, and requested that I make a thorough examination and if possible find the cause of the trouble.

I made sections of all these twelve portions, and having stained and mounted three or four of each, I began a careful examination of all in their order, the specimens having been kept separate.

The very first thing to do was to find the base, or lowest portion, of each curetting; not a very easy thing, by the way. Having decided this in two of the currettings, I examined carefully the base, or deepest portion. After considerable searching I found some cells that appeared to be different from the majority and to be arranged in another manner. Taking some of the unstained sections from these and using a differential stain, I made out a number of squamous epithelial cells, and continuing work on this line, I soon found a mass of cells in one section and small trabeculæ in others.

These squamous cells could have come from only one place in the uterus, viz., the portio vaginalis. They showed beyond peradventure that there was an epithelioma of that part, some cells from which had traveled backward by the lymphatics to the fundus of the uterus, had lodged there and commenced to divide and form an epithelioma

exactly similar to the primary growth in the portio vaginalis, the irritation of their growth causing hypertrophy of the mucous membrane above them.

This is a very interesting case, being only the third one I have seen within the last fifteen years; and, so far as I know, the condition is not mentioned in any of the textbooks. The "American Textbook of Pathology" mentions three positive cases but gives the impression that they are primary in the uterus.

This, it seems to me, is an impossibility, as these squamous cells are in every case below the glandular mucous membrane, and there is no structure there from which they could possibly arise. Hence they must have come from the only part of the uterus that is covered with squamous stratified epithelium, viz., the portio vaginalis.

I have little doubt but that many cases of persistent bleeding from or near the fundus are brought about by the irritation of a neoplastic growth in the lower part of the mucous membrane, and which is not reached by the ordinary curetting. I further believe that these cases are far more common than they are generally thought to be.

This shows the necessity of deeply curetting to get at the base of the hypertrophied membrane. Too frequently doctors send me curettings where they have merely skimmed off the surface of the mucous membrane.

All curettings should be examined by a competent pathologist. It will save life.

Eye-Symptoms of General Disease

This article continues the excellent series (eventually to be reproduced in book form) contributed by Dr. Shastid on this subject—a series which should be closely studied by every general practician

By THOMAS HALL SHASTID, A. M., M. D., LL. B., Marion, Illinois

VIII.—Eye-Symptoms of Locomotor Ataxia

OUT of all the long list of organic affections of the brain and spinal cord which implicate the eye and its appendages we have room for only two: locomotor ataxia and disseminated sclerosis. With the former of these diseases the present article will deal; while the latter affection will constitute the subject of the paper next succeeding. That paper, by the way, will be the last of this series.

The ocular symptoms of tabes dorsalis are:

1. Epiphora.
2. Pupillary changes.
3. Paresis and paralysis of the accommodation.
4. Paresis, paralysis, and ataxia of the extrinsic muscles.
5. Atrophy of the optic nerve.

Epiphora—Stillicidium lacrimarum is a rather common affection in tabes. Some authorities indeed state that nearly half the subjects of locomotor ataxia are troubled, at one time or another, with the falling of tears. The complication is rarely due to paresis of the orbicularis palpebrarum muscle, but almost always to an overproduction of tears—a hypersecretion which seems to be produced in much the same way as the hyperidrosis of the face which also often occurs in tabes. A great mistake is made, in some of these cases, of sounding the lacrimal duct, as if a stricture of that passage were responsible for the trouble in question. Slitting of the canaliculus is, of course, a rational and successful procedure in some of these cases.

Pupillary Changes.—The pupillary alterations of tabes are known to almost everyone, and they should indeed be widely understood and continually remembered. These

changes, slight as they might appear to be, are often the initial symptoms of locomotor ataxia, and thus are of very great importance.

The pupil, in tabes, is nearly always contracted (myotic). Myosis, in fact, is, as one might say, the normal condition of the pupil in locomotor ataxia. This tabetic pupil, moreover, contracted as it is, is stationary, i, e., it gets no larger in the dark and does not become smaller in the light. However, immobile as the myotic pupil of tabes is to changes of illumination, it responds quite normally to acts of convergence on the part of the two eyes.*

This phenomenon of irresponsiveness to light but responsiveness to convergence is everywhere known as the Argyll-Robertson pupil. The Argyll-Robertson pupil, however, does not always appear in locomotor ataxia, hence its absence does not prove that the patient is not to become ataxic. It is present, furthermore, at times, in other organic diseases. Nevertheless, the Argyll-Robertson pupil is a symptom of very decided value, and its presence means indubitably some severe organic lesion of the brain or spinal cord, while its absence suggests very strongly that the patient is not, and is not probably soon to be, a victim of locomotor ataxia.

When the Argyll-Robertson pupil does not exist, the pupil may even be larger than normal (mydriatic); or one pupil may be larger than normal and the other smaller.

Paresis and Paralysis of Accommodation.—These ocular manifestations occur only when the pupil is mydriatic, never when it is myotic. These symptoms, furthermore, are always among the latest of all the ocular symptoms of tabes, and never occur till the pupils have been enlarged for some time.

Affections of the Orbital Muscles.—The extrinsic muscles of the eye become affected, at some period, in perhaps a fourth of all the cases of locomotor ataxia. Ptosis, either alone or together with diplopias of various kinds, may annoy these patients exceedingly.

These complications are often hardly so much complications as the earliest manifestations of the general disorder. This gives to them a very great importance. Furthermore, an ignorant oculist now and then performs a strabismus operation on one of these unfortunate patients, not understanding that in actual paresis of a muscle of the eye an operation is hardly ever of even the slightest benefit. Once in a while a "graduate optician," with a four weeks' education, attempts to correct the trouble with glasses, but, as a rule, about the only thing a tabetic patient can do to get rid of his troublesome diplopia is to cover up one of his eyes and use the other only.

Nystagmus (involuntary rhythmic movements of the eyeballs) appears in several varieties—which, however, need not here be discussed.

Atrophy of the Optic Nerve.—This is the greatest curse of locomotor ataxia, not excepting the "lightning pains" and even death itself. It appears betimes, as a rule, and is often the earliest symptom of the general disease. It means, generally, total, or practically total, blindness; and the very worst feature of the whole affair is that, though the patient is blind, his general affection, after the blindness has set in, almost always either improves or else remains at a standstill. If the blindness comes on late in the disease, however, the patient will sometimes promptly die, and he is generally glad to know in advance that such will be the case.

The two eyes are usually affected simultaneously in the optic atrophy of tabes, and proceed straightforward to blindness with nearly equal pace. One year is an average interval between the onset of the atrophy and the termination in darkness. Sometimes, however, the course is run in six months, and cases have been recorded in which as long a period as four years passed before the patient was totally blind.

The color sense is generally the first to suffer. The patient, if intelligent, discovers very early that he has great difficulty in

*The response is generally said to occur as a result of "accommodation." That, however, is a great, though not a serious, mistake. Place over each eye a lens of such a strength that no effort of the ciliary muscle can be employed when the eyes are turned upon a near object, and still the contraction of the pupil takes place when the eyes cease to look at far objects and look at something near. The contraction, in other words, is not consentaneous with the accommodation (contraction of the ciliary muscle) but with the convergence (contraction of the internal recti muscles.)

recognizing objects which are green. He may see their form in a general way, but he has much trouble in telling what they are, because he does not see their color. Then the vision for other hues is affected. Subjective sensations, next, such as muscæ volitantes and sparks and flashes of light, are common, and even "colored stars" and "all sorts of fireworks." Erythropsia, when all objects appear to be of a red color, is now and then a prominent symptom. Fog and smoke hanging between the eye and the world are complained of bitterly.

The field of vision becomes contracted circumferentially apace, and islands of total blindness for every form and color of object appear at various places in the field. Worry and overwork provoke, almost invariably, an exacerbation of all the ocular troubles. By and by, however, the lights cease, the fog thickens, and everything is black—except an occasional phosphone, or subjective luminous spark, which only serves to remind the benighted sufferer of the lighted world around him which he will never see again.

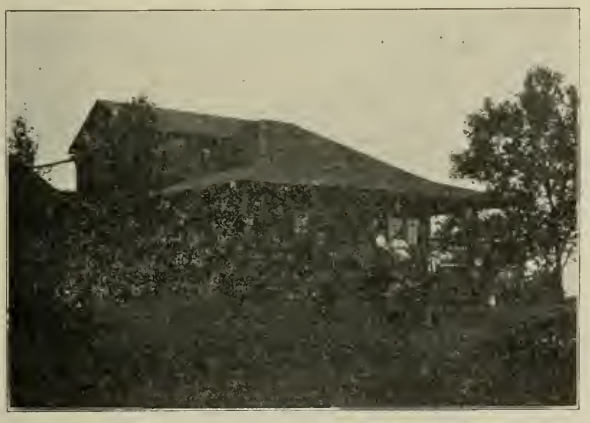
A Country Doctor's Life in Hawaii

By HIS WIFE

Dr. E. S. Goodhue is one of the most prominent physicians in Hawaii. He is known not only as a physician of unusual ability and an authority on tropical diseases, but as an author and poet. This home life of the Doctor so well described by his wife is of special interest

THIS is in answer to a request, eight times repeated, for an account of my husband's work or home-life in Hawaii.

Perhaps the interest was awakened by his sketches entitled, "Some Doings of the Chicago Company Concern L't'd in the Sandwich Islands," which appeared serially in *The Anglo-American Magazine* a few years ago, and other papers under various titles in *The Open Road*, describing our experiences here. The same may be said of "The Mild Adventures of a Yankee Family in Hawaii," appearing now in a Boston children's paper. In all these the writer, as usual, kept himself in the background.



Dr. Goodhue's beautiful Hawaiian home. Jack London and wife on the veranda.

I know of no other personal sketches by my husband except "An Incident in the Practice of a Country Doctor in Hawaii," contributed to the *Bulletin* of the American Academy of Medicine at Dr. Shastid's request. But there have been numerous sketches and references by visitors who have "passed by," in books and papers (it is a fad of mine to collect such personal notes), some of them done with skilled and sympathetic hand as, for instance, those of Mr. and Mrs. Jack London. But my husband has persistently refused to allow his picture to accompany these papers, except in one case where the request of a New York magazine editor was complied with in a paper on "Race Suicide." This paper, the second series of which is appearing in

The N. Y. Medico-Legal Journal, has received favorable notice from the German government.

When I told my husband that I was going to send Dr. George F. Butler my own ar-

A view of the home from the cliff-side.

ticle this time, he laughed, and gave me permission to "go ahead," adding that I must not consult him in the preparation of the article!

In the last year of his practice in Riverside, California, he was taken ill with a bronchopneumonia, and while in bed received an appointment to a government position at Koloa, Kauai. We were delighted, for we had looked up Hawaii in our reading, and besides, had been stimulated by contact with Mr. G. H. Dole, a resident of Riverside and brother to the man who was then president of the Republic of Hawaii.

When we reached Honolulu, Liliuokalani was a prisoner in the "Palace," now the Executive Building, and things were somewhat unsettled. We soon had a cosy home on Kauai, and my husband entered upon his work at the small government hospital and among the natives with his usual enthusiasm and thoroughness.

From the beginning he took a special interest in the subject of leprosy, a disease he soon had frequent occasion to see, sending a large number during his incumbency to Molokai.

In this period he made a report to the government suggesting better methods of segregation and more thorough disinfection. At the close of 1896, there being an opportunity to take a larger field, my husband removed to Wailuku, island of Maui, becoming medical superintendent of the Malulani Hospital, then one of the largest hospitals outside of Honolulu, besides assuming charge of the work of two sugar plantations and the private practice of the two districts.

Oh his leaving Koloa, a friend of his, Dr. Smith, brother of the attorney-general of the Republic, became the government physician, and shortly after in the discharge of his duties relating to the segregation of lepers, was shot and killed by the relation of one of the lepers.

The life at Wailuku was pleasant though arduous. The island is a beautiful one, and back of our house was the grand Iao Valley, and in front the mass of Haleakela with its extinct crater, always changing in tint and contour, and a daily inspiration to us both.

In April, 1898, having some matters to attend to on the mainland, my husband

Another view of Dr. Goodhue's home.

disposed of his field, and we all sailed (ourselves and boy now nearing five years of age) reaching San Francisco just as war was declared against Spain.

All was enthusiasm and excitement as we traveled across the continent—talk and music and other contagious manifestations of patriotism. .

We thought some of going to Europe, but an old desire to wander in our own land prevailed, and so we staid in America, taking in the country from Portland, Ore., to Canada, going by stages, visiting the various cities and places of interest.

Several months in New England, a post-graduate course in New York, then through the Middle States to the South.

We spent a pleasant part of the winter in New Orleans, going to the tropical edge of Florida where my husband had spent happy days in the years gone by, ending up in Los Angeles, where we took a cottage and established ourselves for a few months.

All this time my husband was preparing medical articles out of the data he had accumulated while he was practising; these were published in all the principal medical journals during 1900 and 1901. "Leprosy," in *N. Y. Medical Record*, "The Danger from Leprosy," and "The State Control of Leprosy," in *Philadelphia Medical Journal*, "Origin of Leprosy in Hawaii," *Journal American Medical Association*, and others were special articles.

We returned to our original location in Koloa in the fall of 1900, when the field had been extended. Practice of two districts, including two sugar plantations and three hospitals, demanded my husband's time, leaving but little leisure.

During our previous stay we had been visited by Dr. F. M. Crane of Pittsfield, Ill., an old classmate of my husband's, and Prof. John R. Musick, author of "The Columbian Historical Novels," who wrote a book which afterwards appeared under the title, "Hawaii: Our New Possessions." These dear friends of ours, now both dead, spent some happy weeks with us together, visiting the chief places of interest on the island.

It was my husband's privilege afterward to defend Mr. Musick from attacks made upon his character and work. Not long before his death, which was hastened by these worries, he wrote my husband: "None of my friends or relations have so befriended me as you have, dearest and nearest of friends." He was hurt during the tornado which occurred in Kirksville, Mo., an account of which Mr. Musick wrote for *The Century Magazine*. He may not have belonged to the "upper literary ten," but he wrote books which were read, and his heart was a human heart and not a withered organ.

It was only last year that Dr. Crane died, at the height of his professional career, beloved by all. My husband was greatly shocked and depressed by his death; they had been the firmest of friends and best of correspondents, brothers in fact, drawn together temperamentally and by matters of common interest and sympathy.

Along the beach.

After the lapse of some months, it seemed natural for my husband to offer some tribute to the memory of his friend, yet he could never do this in the ordinary formal way. He thought of issuing a class memorial, and wrote to most of the members of his class, but could not secure the literary contributions necessary to make the matter a success. The sorrow "seethed in his thought of life," and finally he came down from his "Sea-and-Sky room" with some verses which he said would have a "wordless dedication."

Thus they appear in a booklet issued by a unitarian society of Boston, and have had a large circulation, bringing many letters

of grateful thanks and praise, from the poor and unlearned as well as from distinguished writers. The cheerful spirit they show is but the flowering of a deep sorrow, based upon a confident expectation of a life beyond. Perhaps all of your readers have not seen the poem, and so it may end this brief letter:

I'LL SOON BE COMING UP YOUR WAY

'Tis but a journey, dear,
And
We shall meet again, I know,
In that fair land where thou hast gone—
Where flowers and palms and blessings grow!

'Tis but a step from here,
And
There, as here, the skies are blue;
What matters it what lies between,
If ships are strong and friends be true?

'Tis little change, they say,
And
The wide river is not dark—
While his firm hand is at the helm,
Guiding along the tiny bark!

'Tis wrong to mourn: I laugh
And
Wave my hand to you, my dear;
Death has no terrors for me; ah,
He is the least foe that I fear!

Then shall I wear bright flowers,
And
Smile with the sunshine of the day:
Good-by, my friend, my lucky friend—
I'll soon be coming up your way!

(*To be Continued.*)

Some Remedies of Practical Therapeutic Value

A number of medicinal and other therapeutic agents are here suggested, which have proven, in the writer's own practice, of decided value in the class of diseases described

By M. CLAYTON THRUSH, Ph. M., M. D., Philadelphia, Pennsylvania

FOR several years past, a number of our most prominent clinicians have endeavored to hamper therapeutic progress by their pessimistic tendencies in referring to the treatment of disease by the use of drugs; yet in every instance that I have been able to investigate, I have found these same practicians not only using drugs in their private practice, but using them to such an extent as absolutely to detract from the opinions they express when speaking before medical bodies or in formulating articles for medical journals. There are a number of these hypocrites in every "medical center," and if these men will only try the following formulæ in the diseases mentioned, I feel confident that they will say, "there is some value in drugs after all, if used scientifically."

Influenza—that common and distressing malady which afflicts a large percentage of every community at rather frequent intervals, and about the most common disease the average practician is called upon to treat. This is a disease in which the sequelæ or complications are usually of more importance than the disease itself, and everyone who has practised medicine to any extent has observed numerous cases in which the patient dates his ill-health from "that attack of grip" several months before; especially does this statement apply in the aged. Therefore it behooves us as physicians to treat this disease in its true light, recognizing its importance and administering agents that will promptly relieve the symptoms.

It has always appeared surprising to me to hear physicians and patients, in speaking of a certain attack of grip, mention the fact that they were sick for so many weeks with the disease, when the disease can always be cured in two to four days if the proper treatment is carried out, provided of course there is no intercurrent disease complicating the grip attack.

In every case of influenza we should administer calomel in divided doses: I usually recommend 1-4 grain of calomel with 1 grain of sodium bicarbonate every half

hour for eight doses, then follow this with a heaping teaspoonful of a standard effervescent saline laxative. This will relieve the engorged liver and the nauseated condition of the stomach, which are always present to a certain extent at the commencement of the attack. If the attack is mild the patient will not be ordered to bed, but in the severe attacks this is, of course, essential. Give liquid diet until the fever and aching pains subside, then a semiliquid, and finally solid food. If there is any associated bronchial irritation, which often is present, then give a hot lemonade and keep the patient well covered. Often a warm sponge-bath, followed by an alcohol-rub, is of decided value and comfort to the patient, especially in children.

For the disease proper I use the following combination:

Acetphenetidini .....grs. 32
Phenylis salicylatis .....grs. 32
Caffeinæ citratis .....grs. 16
Salophen .....grs. 24

Misce et divide in capsulas No. 16. Signa: Give one capsule every two hours until pain is relieved, then every four hours.

This combination acts like magic, and in most cases relief is afforded within a half hour after the first capsule is administered, and before the third dose is due all the aching pains have about subsided. The patient is usually able to sit up in twenty-four hours and be out and around in another day. For the prostration which results, give some quick-acting tonic such as the triple arsenates with nuclein, one every three hours. Where the weakness is pronounced, with no appetite for food, I use the following with excellent results.

Vini cocæ .....ozs. 2
Elix. gentianæ glycerinati ..ozs. 2
Elix. cinchonæ .....ozs. 2
Glyceriti pepsini .....ozs. 2

Signa: One tablespoonful in water after each meal.

If tonsillitis is present, I order applications of chloroform liniment to the throat, and in severe cases cataplasms of kaolin, besides the following gargle:

Potasii chloratis .....grs. 30
Fluidextracti rhois glabræ..drs. 3
Glycerini.....drs. 3
Mellis rosæ .....drs. 6
Aquæ destillatæ q. s. ad....ozs. 2

Signa: Two teaspoonfuls to be mixed with two tablespoonfuls of water. Gargle every two to four hours, as required.

By carrying out these instructions your influenza patients are rarely sick longer than one or two days, and a speedy convalescence results.

The above analgesic capsule, by the addition of from 1-8 to 1-4 grain of codeine, is of the greatest value in all forms of neuralgia and pain in any portion of the body, such as localized peritonitis, orchitis, cystitis, pleurisy and the like. Try and see the results you receive.

Some Surgical Suggestions

And now turning from one of the most common medical conditions we will consider one of the most common minor surgical operations, viz.:

Circumcision.—This operation can be done in a number of ways, essentially the same and differing merely in technic, but the method I have found of the greatest value is the use of the Skillern or Ricord phimosis-forceps in cutting off the excessive foreskin, and then approximating the two flaps and introducing about eight sutures of iron-dyed silk.

The most important point relative to the subsequent management of the case depends upon the dressing now applied. By the method usually employed, a layer of gauze, either plain or medicated, is wrapped around the penis near the head, and the result is that every time the child urinates some of the urine soaks through the gauze and infects the stitches, often causing small stitch-abscesses. This daily changing of the dressings is quite painful and the child dreads the time for urination or dressing to approach. By my method, which I have as yet seen no one else employ, all this is obviated.

After the sutures are introduced, usually eight being required to make a nice approxi-

mation, then a small strip of iodoform gauze (5-percent), about three-eighths inch wide, is wrapped around the penis, covering the sutures, and a coating of antiseptic flexible collodion applied, which renders it waterproof. This collodion is flexible collodion (U. S. P.) containing bichloride of mercury to render it an antiseptic. Now when the child urinates the urine runs directly off and the sutures remain dry. By this method the child requires no further treatment, from either mother or physician, for one week, when the collodion-gauze band is removed and the sutures are taken out. The sutured surfaces will be found dry and healed without any irritation whatever. Consider what suffering is saved the child and what torment is saved the mother by this simple procedure. Anyone who has had experience in this line of work can appreciate its value. The child can play around as though nothing had occurred the day after the operation.

Remedies Useful in Obstetrics

One of the most common difficulties encountered by the practician of midwifery is retention of the placenta after delivery of the child. This at times causes considerable anxiety, as everyone realizes the dangers resulting from a portion of the placenta remaining adherent to the uterus. By a very simple procedure this can be obviated, as after using it in a series of 300 cases I have not had a single case in which the placenta was not delivered intact inside of five minutes after the birth of the child.

As the child's body is delivered, no matter whether vertex or breech presentation, instruct the nurse to make moderate pressure with the palm of the hand over the uterus and cause it to contract proportionately with the removal of the body of the child, and then retain it in this contracted state, by being careful not to remove her hand at any time (as it is liable to dilate somewhat) until you have completed tying of the cord, when you place your left hand over the uterus as the nurse withdraws hers, and by the usual Credé method cause the expulsion of the placenta; the right hand merely guiding it by gentle traction on the cord.

This is a simple yet effective procedure and one that has saved me many anxious hours. The principle of its action is this: After the child is expelled, the uterus usually contracts temporarily, but only partially unless assistance is given as described above, and then it often redilates before the placenta is detached from its attachment to the uterine wall, and as a result it remains adherent and sometimes tears in an effort at removal.

SURGICAL AND GYNECOLOGICAL NOTES

BY EMORY LANPHEAR, M. D., LL. D.

COMMERCIAL HELPFULNESS

Red Cross Notes, Series No. 6, came to our table today. It is a trade publication, does not pretend to be anything else, frankly advocates the business interests of its publisher, and is full of hints which any practising physician will find useful. The men who see nothing but commercialism in trade publications can figure out how such items as the following are going to "sell goods:" "Ten percent of alcohol reduces the digestive power of papayotin about one-fourth; while 50 percent of alcohol completely stops it."

ELONGATION OF CERVIX UTERI

A number of cases have been reported of delayed labor due to elongation of the cervix. The anterior lip is the one almost invariably at fault. The pathological condition depends upon some mechanical interference in the return-circulation, so that

the dilation during delivery will usually cure if labor can be completed without operative interference. As soon as the membranes rupture the forceps should be applied; and at the completion of labor the hypertrophied lip must be pushed far up in the vagina as otherwise it may protrude beyond the vulva and become infected. In the worst cases amputation may be necessary before delivery can be effected.

BACKACHE IN WOMEN

A source of backache in women seldom recognized is a chronic periostitis of one or more spinous processes—the lumbar or sacral vertebræ being most frequently affected. It may be recognized by the exterme sensitiveness to pressure. This form of backache is likely to be worse when the patient is in a warm bed or on awakening in the morning. There may be slight daily elevation of temperature. The pain radiates sideways or downward; never ceases on its own account, but lessens and gradually will cease entirely under treatment for periostitis, which in this affection is one application of two leeches close to the spinal process from which the pain proceeds; and this promptly secures decided relief. The next step is painting the skin surrounding the affected spinal process once a day with tincture of iodine, and internally potassium iodide.

NEW TREATMENT OF EMPYEMA

Murphy of Chicago reports good results in the treatment of pyothorax by aspiration of the pus, followed by the injection of 1 to 5 ounces of a 2-percent solution of formalin in glycerin through the same cannula without removing the instrument. The treatment is repeated in ten days to two weeks if necessary. Theoretically, the method is based on the fact that the injected solution will not only wholly or at least partially sterilize the pus-cavity, but will also stimulate the inflammatory products (adhesions, flocculi, thickened pleura, etc.) and lead to their gradual absorption. In this treatment there seems to be a certain amount of breaking down and softening of these exudates, possibly in part due to the hygroscopic action of the glycerin. In any event, the irritative properties of the solution brings an enormous number of leukocytes to the area, and also a dilution of the contents of the cavity by serum.

TUBERCULOUS APPENDICITIS

It has been demonstrated repeatedly of late that the vermiform appendix may be the site of a primary tuberculous inflammation. It may be accompanied by infection of the ileocecal lymph-nodes out of all proportion to the amount of inflammation found at operation. Therefore in operating for appendicitis, when this condition is found, it is best to remove as many of the glands as are accessible, in the hope of removing all foci for future infection.

PRESERVING PATHOGENIC SPECIMENS

Surgeons who desire to preserve their pathologic specimens in their natural color may use the following method of preparation: The fresh specimens, either washed in salt water (7.5 : 100), or unwashed, are immersed in a 4-percent solution of commercial formaldehyde, in which they are allowed to remain forty-eight hours. They are then alllowed to remain in alcohol of 90 percent for not more than twenty-four hours. Two hours are sufficient for the alcohol immersion in the case of fragments of organs or of organs of small animals. The specimens are then placed in another portion of alcohol of the same strength, to which is added drop by drop such a quantity of the following solution as may be demanded in the particular case: Saturated solution of picric acid, 100 Cc., glacial acetic acid, 4 Cc. The initial color of the specimens will appear in a few minutes. The quantity of the picro-acetic solution to be added depends upon the dimensions and thickness of the specimen, and does not exceed 10 Cc. per liter of alcohol. The specimens will keep indefinitely in this solution, but

it is advisable to transfer them to the alcohol in which they are to be permanently kept within a few days. For large pieces it is advantageous to add a small quantity of hemoglobin to the picro-acetic solution. The color of the specimens remains permanent after this treatment.

PICRIC ACID IN BURNS

A query in last month's CLINICAL MEDICINE, on this subject, has excited a good deal of interest. As a further contribution to its discussion we quote the following from Shoemaker's "Materia Medica:"

"The application, five to ten times daily, of a 6-percent solution of picric acid [in water containing alcohol] has been found useful in erysipelas. Picric acid constitutes also a good dressing to *superficial* burns, and has been used several years for this purpose in the Charity Hospital of Paris. A saturated solution of picric acid is applied upon compresses. [A saturated solution contains about 1-percent of picric acid, the latter dissolving in 85 parts of cold water, facilitated by heating.] It exerts an analgesic effect upon the surface. It usually gives rise to no irritation, and the only disadvantage of the method is that the solution communicates a yellow stain to the tissues with which it comes in contact. Dr. Charles Willems, of Ghent, speaks favorably of its use in burns of the first and second degrees: he uses it in the form of an ointment in the strength of 1 to 2 percent; he has never observed any toxic symptoms from its use, and the only inconvenience has been a yellow discoloration of the skin, which may be got rid of by alcohol washing or by a watery solution of carbonate of lithium. The late Dr. Quinquad recommended picric acid as a local remedy in epithelioma. In chronic eczema Calvelli claims good results from the application, several times a day, of a solution of 1 1-2 parts of picric acid in 250 parts of distilled water."

LEUKOCYTOSIS FOLLOWING THIOSINAMIN

Charteris discussed the influence of thiosinamin on the induction of leukocytosis (*Lancet*). He had obtained no benefit from the former in the treatment of fibroid conditions. It had failed in fibrous ankylosis of joints when administered for months by inunction, injection and by the mouth, and aided by massage and rupture of the adhesions under anesthesia. In no instance had he been able to demonstrate on himself a leukocytosis from its use, but marked fatty changes occurred in the epithelial and gland-cells, none in the fibrous tissue. But in a case of chronic rheumatoid arthritis the leukocyte count rose from 5200 to 10,400 six and a half hours after an injection of 2.3 Cc. of fibrolysin.

::: THERAPEUTIC NOTES :::

ARE DRUGS OF LITTLE USE?

The Public Analyst of Great Britian, who had spent some time looking into the matter of drug adulteration, is said to have remarked: "A large number of people, even in the medical profession, are of the opinion that drugs are of little use; but from my recent experience I am inclined to question that they have ever been tried." And yet physicians can not realize the reasons for the revolution in drug therapeutics we are advocating, and our reports of results from active principles seem to them like fairy tales. Not to those who make the trial for themselves, however.

STRYCHNINE AND BRUCINE

Dixon and Harvey find by experiments that strychnine is eight times more toxic than brucine, and that their action is not

identical. Strychnine acts on the sensory nerves of the cord and causes death by asphyxia, the pectoral muscles being locked in convulsions. Brucine induces slight convulsions at first, but this effect quickly passes and it then acts as a narcotic, paralyzing all the motor nerves. Its action resembles that of curarine and cicutine.

PICOTOXIN FOR THE PERSPIRATION OF GOUT

Murrell, in *Clinical Journal*, states that gouty patients often suffer from profuse perspiration, not during the attack but at other times. For this picrotoxin is an infallible remedy. He gives a milligram twice a day for a fortnight. He considers picrotoxin a reliable and certain remedy for nearly all forms of sweating.

ENURESIS AND EPILEPSY RELIEVED

M. C. Brasher says, in *Ellingwood's Therapeutist*, that a boy of twelve had enuresis; he was also epileptic and had been put on bromides until almost an idiot. He was given rhus aromatica and thuja with a little cicutine hydrobromide four times a day. The urine cleared up at once, the enuresis almost entirely ceased, and he had had but one convulsion in the five weeks during which he had been treated. The result was a notable illustration of the effect following this treatment.

AMERICAN ASSOCIATION OF CLINICAL RESEARCH

We have received a circular-letter from Dr. James Krauss, 419 Boylston Street, Boston, Mass., announcing a movement in favor of establishing an American Association of Clinical Research, for the purpose of ascertaining the present exact status of clinical medicine and surgery, and of advancing the same, or any other method that will insure exact and abiding results. A meeting is called for October 27, at John Ware Hall, Boston Medical Library, No. 8 Fenway, Boston, at 10 a. m. The sessions will be carried through Wednesday, and if necessary Thursday and Friday. An *American Journal of Clinical Research* is contemplated. Those interested are invited to participate in the meeting.

RHUS TOX. IN SCARLET-FEVER

Howes recommends rhus toxicodendron in scarlet-fever when the skin is dark-red or livid, the mucous membranes of the mouth red, the tongue red and glazed, or narrow, pointed and dark, with a brown coat, offensive breath, offensive discharges, and rapidly failing vitality.

LECITHIN AND COBRA-VENOM

Calmette found that lecithin added to cobra-venom conferred on it the hemolytic power of viperine venoms. Brunton suggested that we might thus confer on any edema-producing toxin a contrary power. Cameron said that diaphoresis was better than purgation, the sweat being rich in salt, the feces presenting only a trace. Sillar urged as a cause of edema the absorption of fecal toxins.

CHROMIUM SULPHATE

"Recently," writes J. A. Burnett, "I tried chromium sulphate in a case of bladder and urinary trouble in an old man, and it would produce a diarrhea each time, with severe griping low down in the rectum. It must have been the medicine for it was tried several times with the same results each time. It had no effect on the too frequent urination and the burning sensation in the urethra when urinating."

LYCOPUS AND LYCOPIN

The Eclectic League for Drug Research states that lycopus displays two main activities, that of a cardiac sedative, possibly through a direct action on the muscle; and that of an astringent to the capillaries, primarily those of the lungs and bronchi, and second of the urinary organs and intes-

tines. It has been employed for the disturbed heart action and passive hemorrhages accompanying pulmonary tuberculosis. The case showing great debility and nervousness is most susceptible to its influence. Chronic bronchitis is remedied by lycopus, if there is local debility and passive hemorrhage, or if thin, saneous discharges are present. It is doubtful whether lycopus is of value in diabetes, although some reports indicate its use when great thirst or emaciation are present, with the passage of large quantities of clear urine.

Lycopus has been used for chronic diarrheas without much definition of the cases specially suited to it. In heart lesions it tones the muscles in cases showing marked relaxation. The dose should be as large as possible without disturbing the stomach.

COTTONSEED OIL IN TUBERCULOSIS

"In your June issue of CLINICAL MEDICINE," writes Dr. W. K. Evans of Stamboul, La., "you ask for practical experience in some phase of the treatment of "tuberculosis." My best results have been obtained in the beginning by putting the patient on refined cottonseed oil combined with creosote and in addition to this all of the hygienic precautions such as air, cleanliness, and rich diet in an easily digested form.

THERAPY OF COPPER PHOSPHATE

Copper phosphate is a bluish green powder, soluble in acids, insoluble in water. It has been utilized to detect CO_2 in potable waters. Luton of Rheims proposed it as a remedy for tuberculosis, especially recent forms. Merck gives the dose as 1-8 to 1-4 grain several times a day. Luton advised hypodermic injections of 1 Cc. of a solution containing 5 Grams to 60 of equal parts of glycerin and water. This was renewed every fifteen days. It was also injected into tuberculous foci. The location of choice was behind the trochanters. The object sought was to destroy the tubercle bacilli and render the *terrain* unfavorable to them. The local effects were limited to a little pain, and there were usually no accidents. The general effects were: immediate, a reaction like that of tuberculin; later, general improvement and limitation of lesions. The only inconvenience was the appearance of cuprism if the doses were too large or long-continued. Luton also used the phosphate or acetate of copper as a lotion, potion, pill, powder, pomade, and collyrium.

MISTLETOE

Dr. W. H. Young of Boonville, Ark., says that the American mistletoe, phoradendron flavescens, is far superior to ergot in many cases. He makes his tincture from the fresh plant. Mistletoe spends its force on the longitudinal fibers of the uterus, while ergot contracts the circular fibers and may hinder the progress of the contents. No bad effects are to be apprehended from mistletoe. In purpura hemorrhagica mistletoe is better than ergot or hamamelis, and acts well in any bowel trouble with free watery discharges, constringing the mucosa and checking the loss of fluid. It is a splendid remedy in hemorrhages from the lungs or the bowels, and relieves spasmodic contractions of the bladder in acute cystitis—sometimes in chronic forms, but here we often fail to get the exact indication for this agent. Dr. Young makes his tincture by filling a wide-mouth bottle with the fresh herb, adding 95-percent alcohol, macerating fifteen days and then expressing. Of the tincture he administers a half to one dram every ten to thirty minutes until the desired effect has been secured, in acute cases; in others he gives a dram every two to four hours.

THE BERMUDA ONION

Dr. R. Walter Smith of Fannin, Texas, praises the Bermuda onion, eaten raw. He has found that it has a good laxative action, is a hypnotic and antimalarial, and when eaten daily for several months has proven of great value in the treatment of gallstones. He reports several cases, one being of malaria, another of constipation. He wants others to try them and report.

Nature, Function, and Pathology of Sleep

Dr. A. Lorand shows that sleep is the result of a fatigue-toxin, removed during sleep by the action of the thyroid gland; and that somnolency and insomnia are connected with disease of this organ. The rational treatment of these conditions, and their prevention, are also considered

1. *Essence and Detoxicating Function of Sleep*

SLEEP is one of the most important performances of the human body. Bunge reminds us that many persons can go a month without food but never more than a few days without sleep and maintain life. This investigator adduces as proof of his assertion, that a total want of sleep may produce death, the animal experiments of Maria de Manassein, which showed that animals three or four months old die very quickly if prevented from sleeping. Their body-temperature under these conditions also falls about 4 or 5°C. (7 to 9°F.), while the red blood-corpuscles diminish from five millions per cubic millimeter to as low as two millions. Furthermore, important changes take place in the brain of the animals so treated.

Before becoming sleepy we experience a feeling of fatigue and relaxtion. During the day our muscles contract numberless times at our work, and this, according to Weichardt, gives rise in them to an accumulation of toxic products. This latter investigator caused a number of animals upon which he experimented to execute strenuous movements for a number of hours, then preparing an extract from the muscles of these overstrained animals he injected this into other animals. Soon afterward great fatigue came over these animals and death occurred in twenty to forty hours. Binz and Obersteiner maintain that sleep is brought about by an accumulation of the products of fatigue in the brain and that these are eliminated during the period of rest. Thus sleep resembles, in a certain sense, a condition of autointoxication in consequence of the bodily and mental work done during waking hours.

Further on I shall show that sleepiness manifests itself in all conditions that are connected with degeneration of the thyroid gland. I have often insisted that this blood-gland destroys part of the toxic substances that accumulate in the body. And when this gland becomes degenerated it can not perform its detoxicating work, the consequence being sleepiness, as for instance in myxedema, an autointoxication connected with somnolence.

Our present physiological knowledge associates sleep, as well as will-power, imagination, intelligence, and other mental functions with the cerebrum. Degenerations of the thyroid gland brings in its train changes of all cerebral functions, which degenerate when that organ is destroyed or becomes diseased, while they can be improved by an artificial supply of thyroid extract. And since sleep is a function of the cerebrum, it

may be assumed—and this I shall show in the next chapter—that sleep is controlled by the thyroid gland.

Zeygans has shown experimentally that injection of adrenalin in the vicinity of the cerebrum produces somnolence. Adrenalin, we know, causes anemia of any part injected with it by contracting the blood-vessels. Thus with regard to the question as to whether anemia or polyemia of the brain is the condition demanded for sleep, these experiments speak in favor of blood depletion. But still other circumstances may be adduced.

A state of perfect quietude of the cerebrum, as is well known, is a prerequisite of sleep. Thinking which agitates and engages the cerebrum prevents sleep, because this brings an afflux of blood. This fact was demonstrated by Angelo Mosso by some very interesting experiments. He laid a person perfectly level on the platform of scales especially constructed for that purpose and so secured the individual's perfect equilibrium. Then when the person, at Mosso's direction, concentrated his thoughts, the scales tipped on the side of the head because the access of blood disturbed the equilibrium headward.

So everything that causes an increased flow of blood to the brain acts as a hindrance to sleep, as for instance the unaccustomed ingestion of heating victuals and drinks before going to bed. However, a person who is in the habit of taking alcohol before retiring will often sleep so much the better on doing so. Large quantities of an alcoholic, we know, produce a heavy sleep, perhaps by influencing the thyroid, which is stimulated moderately by small quantities of alcohol but is overstimulated by it to exhaustion by large quantities.

Sleepiness after a large meal is ascribed, by Bunge, to the afflux of blood to the digestive organs, leaving thereby the brain comparatively anemic. (Compare the next division on this point.)

Christern has demonstrated on a boy that the blood pressure in the cavity of the skull becomes lower on a person's falling asleep. The pleasant feeling of being refreshed on arising from a good sleep points, perhaps, to the fact that the fatigue-poisons accumulated during the waking hours were gotten rid of while sleeping. In the same way may be explained the feeling of weakness and apathy after a sleepless night by the non-elimination of the noxious toxic products from the body. Bouchard thinks that the urine of a person after a sleepless night acts more toxically on animals than that from one who had a sound night's sleep. This detoxicating action of sleep, it is evident, makes a healthy, regular sleep a necessity for all who would not become prematurely aged or decrepit.

2. *Cause of Sleepiness and of Sleeplessness*

The sleeping sickness of Africa can give us valuable pointers in our search for the causes of the pathological state of somnolence. Persons who are attacked by this malady feel a continued unconquerable desire to sleep. Some years ago, during my winter stay in Brussels, I observed a person affected with the sleeping sickness who was the son-in-law of one of the professors of the medical school. The patient, an officer of the Congo army, had sojourned for several years in that country and became infected. He always was so sleepy that he would fall asleep even at his meals. Dr. Willems reports (in the *Bull. d. l. Soc. des Scienc. Med.*, 1905) the case of one patient who could not keep awake at his wedding, and of another who fell asleep on the threshold of the physician's house whom he came to consult. They are totally unable to resist the unconquerable desire for sleep. If we had fathomed with certainty the cause of this disease, it would perhaps be easier to get at the causes which produce the lesser grades of somnolence, and then solve the mystery which still hangs over the cause of normal sleep.

In the following lines we will examine into what may be the cause that produces that irresistible desire to sleep.

In a communication which I made to the Congress for Internal Medicine which met at Wiesbaden (Germany) in 1905, I have shown that the sleeping sickness is a disease exhibiting an altogether different clinical

picture from that seen in trypanosomiasis, consequent upon the sting of the tsetse fly (glossina palpalis). The sleeping sickness is the result only of the latter. Cases were observed when this disease developed as late as from five to seven years after the initial trypanosomiasis.

In the communication mentioned I ascribed to the thyroid gland an essential influence in the disease, just as that gland plays an important part in other infectious diseases. I came to this conclusion from observing that the patient with the sleeping sickness referred to exhibited all the typical symptoms of a myxedema. He displayed the same unsteady walk, the same striking apathy, slowness of motion, deliberate speech, weakness of memory, dry skin, tortuosity of the temporal arteries despite his young years, slow pulse, obstinate constipation, besides other phenomena identical with those of myxedema. Then, as it were, with one stroke all these phenomena vanished when by my order he took from two to four thyroid tablets (thyraden) daily.

A great similarity of pathologic-anatomic changes is also observed in the central nervous system in the African sleeping sickness and in the condition of myxedema. Thus the English and Portugese commissions who were ordered to investigate the African sickness found in it destruction of the nerve-cells and nerve-processes, chromatolysis, disappearance of Nissl's bodies, and typical accumulation of white blood-corpuscles in and about the blood-vessels. Similar conditions were observed by Whitwell in myxedema and by Walter Edmunds in dethyroidized dogs and apes. These phenomena in both of those diseases were therefore designated polio-encephalo-myelitis.

These two disease-conditions show striking similarities also in respect to etiology. Myxedema, we know, arises by degeneration of the thyroid gland, caused, frequently, by a preceding infectious disease. For during such a condition it becomes the function of the thyroid gland to protect the body against the effects of the infectious matter, in consequence of which this organ is forced to abnormal activity, and this in turn may become the cause of its degeneration. So we find in trypanosomiasis as large a series of symptoms as are seen in Basedow's disease, the latter the result of a similar overactivity of the thyroid gland. And just as by its defensive action the gland ultimately degenerates, so there follows a myxedemic state after trypanosomiasis, the state observed in the sleeping disease proper. Koch recommends as the appropriate remedy for this disease the preparation of arsenic known as atoxyl. But according to Gauthier and Bertrand arsenium is one of the most important chemical constituents of the thyroid gland. It is to be observed that in the treatment of myxedema also arsenic has given good results.

Sleepiness is observed also in animals whose thyroid glands have been removed. In the case of a number of dogs whose thyroid glands were removed I noticed that they slept continually and slept so profoundly that they did not react to even the loudest noise.

In view of all these facts there can be no doubt that the thyroid gland stands in close connection with causation of sleep. In support of this we have the facts that (1) sleepiness is a characteristic symptom of thyroid degeneration, as in myxedema, while sleeplessness is a symptom of an overworked thyroid, as seen in Basedow's disease, and what is a still more important circumstance, that (2) this sleeplessness can be combatted with the serum or with the milk of dethyroidized animals, and on the other hand sleepiness can be overcome with thyroid medication; of which more further on.

Sleepiness is such a characteristic phenomenon in myxedema that Pilcz reckons it as one of the four cardinal symptoms of this disease. This phenomenon is also observed in corpulent persons whose obesity is not caused by overfeeding but by a degeneration of the thyroid gland. In my paper printed in the *Medizinische Klinik* of March 25, 1905, entitled, "Ueber die Entsstehung der Fettsucht nach Entfernung der Blutdruesen" ("The Cause of Obesity after Removal of the Vascular

Glands") I, therefore, designated such cases of obesity as endogenous lipomatosis, and in *The Monthly Encyclopedia of Medicine*, April, 1906, I cited the example of a colleague who fell asleep while assisting at an operation on the cecum, utterly unable to resist his attack of somnolency. Another example is that of one of my corpulent patients who could not attend theater, concert or church because he would invariably fall asleep. However, I saw improvement in such cases upon treating them with thyroid gland.

In acromegaly also sleepiness is a concomitant phenomenon. At the International Congress of Medicine, held at Madrid, I showed that this disease also is not to be ascribed to morbid changes in the hypophysis alone but the thyroid gland as well is affected. So also that feeling of tiredness observed in chlorotic girls is the result of thyroid-gland changes concurrently with changes in the ovaries. Sleep produced by alcoholic narcosis can be shown to be connected with changes in the thyroid glands as I have demonstrated in an article, "Sur la Pathogenie de la Narcose" ("Concerning the Pathogenesis of Narcosis"), printed originally in *Comptes Rendus de la Societé de Biologie* of 25 April, 1906.

Sleeplessness, as already mentioned, depends on overwork of the thyroid gland. This we see in Basedow's disease, in neurasthenia and hysteria where there are likewise changes in the sexual glands, and also in women during the climacteric during which changes in the thyroid and even genuine symptoms of Basedow's disease are prone to appear.

It is a remarkable coincidence that other writers, who had no knowledge of my labors in this line, have referred the origin of normal sleep to alterations in the vascular glands. Thus, according to Salmon, who, many months after the appearance of my article, published a monograph on sleep, claiming that the cause of this state is to be sought in changes of the hypopysis.

I myself, however, can not share in this view of Dr. Salmon, since the sleepiness noticed in acromegaly, where changes in the thyroid gland are never absent, can as well be ascribed as properly to the latter as to changes in the hypophysis.

In numerous experiments I have shown that sleepiness can be produced artificially with the serum of dethyroidized animals, something which, so far as I know, does not occur with hypophysis extracts. Concerning these points I refer to the *Therapie der Gegenwart*, Nov. 1907, also to my monograph concerning the origin of diabetes ("Ueber die Entstehung des Diabetes," Berlin, 1903). My view, therefore, is that normal sleep is regulated by the thyroid, but I do not exclude the influence of other vascular glands.—From Dr. A. Lorand's monograph, "Das Altern, seine Ursachen und Behandlung."

(*To be continued*)

TWO KINDS OF SPERMATOZOA

At a session of the Caucasian Medical Society of Tiflis, Dr. J. Buch reported the fact that there can be demonstrated in the spermatic fluid two different kinds of spermatozoa which behave differently when stained by the method of Reiter and Romanowsky. In the smear preparations some heads color blue while heads of other spermatozoa color red. With Gram's stain some heads color violet and others red.

The author assumes that the two differently colored spermatozoa denote the two opposite sexes—androspermatozoa and gynospermatozoa.

Commenting on this report, Omelezenky writes in *Russky Vratch* (1908, No. 48) that ten years ago he pointed out this fact in his inaugural dissertation entitled, "Spermatogenesis and Its Radical Basis." He at that time stained his preparations with safranin and picric acid after fixing with Fleming's solution, whereby some of the spermatozoa heads took a rose-yellow color and the others a glaring red. The tails of the spermatozoa also presented distinct differences. — *Pharmazeutische Zentralhalle*, 1909, p. 428.

The Business Side of Medical Practice

Showing how the doctor's office should be dignified and have an atmosphere of business, but of cheerfulness and hopefulness. The methods of office management described in this article are well worth any doctor's consideration

II—METHODS OF OFFICE MANAGEMENT
(SEE OCTOBER ISSUE, PAGE 1119)

BY all means the real doctor must have an office and regular office hours. The office must not be a one-room affair, which often degenerates into a common loafing place for the village swains and bewhiskered seers, who squirt up the stove with showers of tobacco juice. How often in my travels have I called upon the leading doctor of a town and found him entrenched in a dingy little office, the entire contents of which would not fill a one-horse wagon box, and whose chief professional equipment seemed to be a faded diploma, the state license, a pill-bag, and a set of gray whiskers.

The real doctor must have an office. There should be a waiting room, neatly furnished and cleanly kept, with a touch of culture in the curtains and pictures, and with books and magazines at handy reach. Yes, fresh magazines, too, not old grease-thumbed back numbers, with the covers gone. There should be one or more private rooms, two better than one, and three better than two. The first should have in it the proper furnishings for general medical cases, where physical examinations may be made. Physical diagnosis is everything—almost, when clinched by the proper laboratory work, and of that more when I get to it.

You may desire to use this room for some of your special work. If so, besides your clinical chair or table, you should have your compressed-air outfit, your neat treatment chair with head-rest and adjustable seat, also stools for yourself and assistants if you have any. There should be one or two glass-top stands for your bottles and instruments. If you cannot afford a special room for your electrical apparatus, here you may have your wall-plate, vibrator, etc., and use your clinical chair or table for your electrical treatments. Perhaps here, too, if the room is large enough, you may have your desk, and the book-cases for your reference library. The desk should be a neat roll-top affair that you may lock to keep out the dust and meddling fingers. It is at this desk you are to be the business man. Here you write out your case-record cards; here in the easy chair you will read up your cases, do your bookkeeping and correspondence. All kept in neatness and order, with a well-designed system to suit your work.

Connecting with this room should be your "surgery." It should contain your instrument-case or cases, a neat sterilizer, an operating table, more glass-top stands, stools, etc. Here you may do all your office surgery, anything and everything that does not lay the patient up in bed. Some major work, too, you may do here, if suitable and

convenient to transportation by ambulance to the patient's home. All this depends upon the circumstances. This room must be kept aseptic, and with details arranged to suit your convenience and ingenuity. The real doctor must be more or less a mechanic —carpenter, plumber, electrician.

The Drug-Room and Laboratory

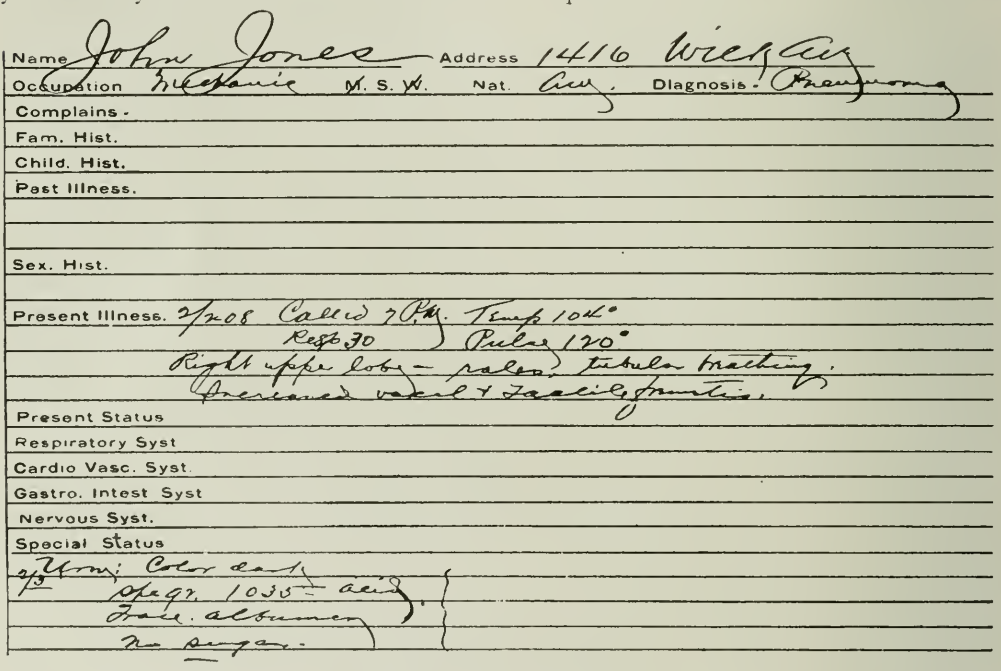
One more room seems almost a necessity. It may be small, but should have light and running water. It is the drug-room and laboratory. Here you should have your microscope, and all the other apparatus, reagents, stains, etc., to do good work with sputum, urine, blood, stomach-contents and fecal matter. If you have taste and tact you may add a small incubator and verify your work by sterilization and cultures.

clean, neat, orderly in every detail, and have at all times the best of care to asepsis.

The day has passed when a man can get and hold a practice by slip-shod work and old-fogy methods. A few hundred dollars will furnish and equip such an office; then to a good beginning more tools may be added as cases come to justify and demand.

The Card-System of Keeping Case-Records

Let us now return to the record-making part of the work. The modern card system is by all odds the most convenient and practical method for keeping the clinical and treatment data, as well as the dollars' and cents' accounts. The case-history may be gone into in detail or cut down to such important facts as are needed to establish a true picture.



Sample case-card—face

Now it may be said that what I offer is not practicable for the average doctor of village, town or city. I am not insisting on four rooms; but I do insist on two, and I insist that the average doctor should have and can have modern things with which to work, and can develop skill and find time to use these things. I insist that he be

I will show here the face and back of a case-card which I use.* One may have these cards made to suit his own design and one or more styles can be used to classify the work. These cards, in a neat file, are always at hand, ready for reference,

*The system I use was bought from the Ever-Ready Mfg. Co., of Cincinnati, O., who have a great variety of cards, and sell an excellent outfit for $4 or $5.

and permitting expanding and contracting according to the number of cases under care. A "Retired" file for closed accounts gives you a permanent list of names and addresses.

Now aside from these cards the average doctor needs to keep only a cash-book, and by all means keep a record of the income and outgo, to the cent. It is almost unnecessary to have any outgo account except "Expense." If one wished to classify he might charge to "Drugs," "Family," "Maintenance," "Auto," etc. If he buys new tools and pays money for them, the money is gone and sooner or later the tools are worn out and in the junk heap. These inventory accounts might reduce an expense loss for the time but in the end it is all loss.

There is no need to call practice accounts (uncollected) a resource until the money is collected. It is just a prospect, the same as either he or his wife, or both, has no accurate and comparative record of the money side of their work.

The System in Application

Now let us apply the system. Make office work cash or essentially so. Whatever your fee is, let it include the medicine. Dispense enough to last until the next appointed call. Do not throw in carelessly. Estimate the doses to last no longer than the day appointed. Nine out of ten of your patients will not return until the medicine is gone. Besides your medical treatment, always do something for them at the office, if you have any justified belief that what you do will help the case. It may be use of the electric current, the vibrator, local applications, injections, tampons, local counter-irritation, ear massage, nasal sprays and

Ref_____

Name _____ Address _____

19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Dr.		Cr.

Remarks _____

Sample case-card—back

any other possibility. What you collect each month is what you have made, and this cash-book is not to show what you earn—it is the record of cash results. A faithful attention to this book will prompt you to get value received for what you spend, and it will serve as a check upon unwarranted spending. Many a man is hard up because

other treatment—do something for them. If it is a surgical case, have the fee agreed upon beforehand, and if you are tactful and come down to an easier reach for the purse, you will always get it in cash.

For your calling practice, each day's work is laid out and the cards are in your pocket-case, properly routed to save time.

Before leaving the house, take out the card and mark down the call, and let the people see you do it. When the last call has come, take off the dates and the total and hand the memorandum bill to the wife or whoever is the proper one to receive it. Then and there have a pleasant understanding as to how the account stands. Often all or something will be paid at once. If not, a promise is made, and you should see to it that these promises are kept.

Be kind, but be a good collector! Insist on the same honor being shown and the same respect given to your bills as to those of the butcher, or for the rent. People often leave the doctor they owe and pay the new one cash. Some leave because they can never get the doctor to present a bill. It is dangerous to let people owe you too long. It is strange how much better people appreciate your work after it is paid for, and, again, where the debt hangs long overhead, they come to the conclusion that you did them no good anyway and your medicine was no better than "so much water." "Short accounts make long friends," is especially true in medical practice.

The Shame of Unpaid Doctors' Bills

It is a shame that doctors, on the whole, collect but one-half their charges. It is an injustice both to the doctor and to those who pay. It would be better to charge but one-half as much and make everybody toe the line! It is a sad story of a kind old physician, who is getting close along to the end of the journey, who really needs the few thousands on his books. Let the busy doctor who talks a good deal about how much charity work "we doctors do" remember that he is making it only that much harder for the younger and average man, and is after all imposing on his fellows, his paying patients; and his charity is of a very questionable character.

Again I emphasize, that while we must be kind, we must be good collectors. The card system will help to this end. It is the cash register for a doctor.

I have nothing to say as to what you shall charge as a regular or for surgical fees. But set an office fee and for all alike, paid cash, medicine included. Certain reasonable exceptions can be made to this rule where the pay is good and temporarily delayed. For surgery have the fee agreed upon beforehand and have it cash or an equivalent. For calling work collect cash each visit or at the end of the case, or soon thereafter.

Take no contracts to cure; no treatment by the month. Put your work on its own merit, then do such work that people are compelled to admit it is the best that can be done, and pay for it willingly. Don't forget to smile!

Next time I shall discuss those phases of publicity whereby you may secure without delay your share of the business, and without sacrificing any real dignity nor departing one iota from the Great Code of the Golden Rule.

AN INHALANT TREATMENT OF PULMONARY TUBERCULOSIS

The number and character of the inquiries continually coming in for the details as to how to use the inhalant for pulmonary consumption, the formula of which I gave in the July number of CLINICAL MEDICINE (p. 794) is impressive as showing the prevalence and almost pitiful helplessness of the profession, as well as the public, in the presence of this dread disease and the demand for practical suggestions for its relief. With your permission I will undertake, for the benefit of your readers, to answer some of those questions, noting more particularly some of the powers and limitations of the remedy.

In the management of this disease, it should be borne in mind that as the human organization is the epitome of all organized life, the product of infinite conditions, so the causes and the correction of its ills are almost infinite. But whatever else obtains, the tubercle bacillus *ever awaits the lowering of vital resistance before making its attack*, hence the practical problem in consumption is to raise vital resistance and "kill the bugs." I *raise and put in order vital resistance*, since without that, even if the bacilli are destroyed, reinfection is inevitable.

From this it is evident that my former article was a sort of suggestive supplement, provoked by Dr. Day's article in the May number and with which my experience of about thirty years with this disease forces me to concur, being practically "ideal." Good proof of this is shown by the fact that his patient survived so severe an invasion after delivery; for, as is well known, tuberculosis is often held in abeyance during gestation, only to increase in virulence and fatality after confinement.

I cannot claim bromine as a "cure" or "specific" in this disease *when it cannot reach the seat of it, but if the infection is confined to the lungs, in all reasonably advanced cases this inhalant will clean them out, and if properly managed constitutionally the patients will recover.* Bromine, like water with fire, if properly applied, will put out the conflagration, but cannot be made responsible for ashes or previous damage.

Bromine is effective in the lungs, signally, because it can be so diluted and guarded as to be carried to the disease in the breath and strong enough to exert its full selective action without creating active inflammation in the tissues not yet destroyed. In beginning its use and in very tender lungs I use an inhaler —simple and cheap—made from an old-fashioned wide-mouthed quinine bottle and two small glass tubes, one of these bent, passing just through the cork, the straight inlet tube passing down into the solution. The outlet, or inhaling, tube stops above the liquid so as to draw the vapor.

To use, charge the container with about 1 1-2 ounces of pure water and 20 to 30 drops, or more, of the inhalant. Use at once. Inhale slowly, steadily and deeply, so as to give the vapor a chance to reach the deepest parts of the lungs and also to *exercise without tiring the entire respiratory muscles.* Use three or four times a day, *thoroughly,* and take whiffs between times to control cough as much as possible. Renew and regulate strength of the inhalant as needed "for effect."

A favorite way with me to use it, where the lungs will bear it, is to have the patient "syphon" the gas direct from the original bottle, or better, put half an ounce of the inhalant, full strength, in an 8- or 10-ounce bottle from which to "syphon" the vaporized medicament mixed with air (some practice being necessary to do this properly). Then have the patient sit erect, shoulders back, remove the stopper and put the bottle to the mouth *with the upper lip over and across the bottle's mouth, about touching it.* Have the patient draw in air violently across the top of the bottle-mouth, so that it "syphons" up the gas which is mixed with the air and enters the lungs. To regulate the strength, inhale as with the inhaler, and if too strong, provoking cough or strangling, remove the bottle from the mouth quickly and *continue to inhale pure air till the lungs are fully expanded.* This dilutes the inhalant and carries it to the disease in the best strength to be borne and also most effective.

As stated in my preceding article, this treatment will increase the discharge of sputum for a few days, and in proportion to the degree of the disease, till the lungs are practically cleared out.

In many cases this stage leaves a comparatively dry and hacking cough, caused by the healing process in the tender lung-tissues. This should be controlled by inhalant more diluted so as not to leave a sensation of dryness in the lungs, but rather a soothing one.

During all this time, do not forget that all vital functions must be brought and kept at their best. Cleanse the system of all self-generated poisons. Do not tolerate decayed teeth in these patients; let them be pulled or filled, and direct the use of antiseptic mouth washes. *Keep the patient in pure air* as much as possible and suggest cheerful surroundings. Have him live literally on the "fat of the land," remembering that his digestive powers and absorbents must be stimulated in detail till they can resist successfully the general tendency to death.

In addition to a careful regulation of diet, I have found several preparations of codliver oil with hypophosphites of value. To those who cannot take the oil I have given, with decided benefit, a preparation of nut-fats called "sevetot." Angier's petroleum emulsion also is of value in some cases, either for

steady use or as a change, for you will find a change from one to another of this class of remedies often desirable, if not imperative. Avoid overtaxing the stomach with these supports, as shown by eructations, etc.

Should at any time some aid to digestion be required, peptenzyme will be found convenient and useful. As a special tonic the triple arsenates and nuclein are helpful. However it would fill a volume to name all the indications, with practical directions, to meet them; but with judgment, close watching and patience many apparently hopeless victims of consumption can be entirely cured. I only claim certainty of action for this inhalant in the lungs and throat, although it doubtless has a good constitutional effect. From close observation for years I am persuaded that could it be introduced into the circulation without too great disturbance of the nutrition it would prove both a "specific" and cure.

The late Dr. Geo. W. Ingraham of Binghamton, New York, some years ago conducted a series of experiments with bromine along these lines, and with a degree of success which, had he lived to complete them, would have doubtless developed a cure for consumption as "specific" as quinine is for malaria. But enough—this field is by no means explored, and it is to be hoped that some man with necessary chemical knowledge "and clinical sense" will become interested and prove it fully.

CHAS. E. DAVIS.

Eureka Springs, Ark.

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[Dr. Davis' predilection for bromine in the treatment of consumption is somewhat analogous to our own preference for iodine, which in one form or another has always seemed to be peculiarly efficacious. Sometimes we use it as, e. g., in iodoform, in connection with strychnine arsenate and calcium lactophosphate; sometimes in the form of calx iodata—the lime in the preparation being invariably indicated in tuberculosis. Nuclein we always have found beneficial. The necessity for keeping the stomach and bowels in a healthy and naturally functionating condition is self-evident—but not always attained. Dr. Davis' article is pregnant with vital suggestions and should set many of us to thinking.—ED.]

A MISTAKE IN A MILK-FORMULA

A correspondent calls attention to an error in the worked-out formula at the bottom of page 874, August CLINICAL MEDICINE. In the explanatory notes we are told that "P = percentage of desired proteids." In milk-formula No. 14 we desire 0.5 per cent proteids. Working out mathematical formula No. 2, viz.,

$$M=\frac{QP}{4}-C=\frac{20\times\frac{1}{2}}{4}-1\tfrac{1}{4}=\frac{10}{4}-1\tfrac{1}{4}=1\tfrac{1}{4}$$

we find that we need 1 1-4 instead of 3 3-4 ounces of milk.

Also in mathematical formula No. 4 we find:

$$S=\frac{Q(L-P)}{100}=\frac{20(5-\frac{1}{2})}{100}=\frac{90}{100}=.9 \text{ oz. or } 7.2 \text{ drams}$$

The completed directions then should be

Take of cream	1½ ozs.	
milk	1½ ozs.	
water	16½ ozs.	Add 2⅔ tablespoonfuls milk-sugar.
lime water	1 oz.	
	20 ozs.	

which is quite different mathematically if not practically.

WHAT IS DOSIMETRY?

A conversation I had a few days ago with a friend, a German doctor of good standing and who is conscientious and laborious in his work, as well as talks I have had with other physicians, has proven to me the undeniable fact that dosimetry is but little understood by members of the profession at large.

This friend of mine made a stupendous statement, one which took my breath away—almost. He liked alkaloidal medication, this doctor said, as the medicaments were so handy and easy to carry about, but that he did not set much store by it, for in severe cases he was compelled to fall back upon the galenic preparations, being unable to rely upon the granules as they would not bring results.

Another doctor, not so long ago, told me that he had no doubt that the alkaloids were

indicated in many instances, but that alkaloidal practice was entirely out of the question, for, said he, "what can you do, for instance, in syphilis without mercury, or what in any other condition where mineral salts are indicated?"

From the above it is easy to be seen that dosimetry in many ways is misunderstood.

I do not know, but the title itself, "alkalometry", sometimes applied, being a misnomer, is misleading to many.

Dosimetry is really nothing but exact allopathic medication, medicines being divided into exact doses, whence the proper designation, dosimetry. This system of treatment—devised by Burggraeve—does not confine itself to alkaloids only but makes use of any product of the plant that will combat disease-conditions, leaving out the valueless matter which unnecessarily increases bulk and affects the taste, while detracting from or even retarding the action of the real active principle, whether alkaloid, glucoside, resinoid, or other organic substance, including what are known as concentrations. Then, besides these organic principles, every active inorganic chemical finds employment in its proper sphere. Among the latter, calx iodata, calcium sulphide, and arsenic are special favorites in the dosimetrist's armamentarium. As a matter of fact, the dosimetric physician does not differ from any regular practitioner of medicine, except in his particular method of prescribing the self-same remedial agents. He employs all physiologic methods—including electrotherapy, hydropathy, mechanotherapy or any other agent which will ameliorate suffering or save life—precisely like all the rest.

This I think is sufficient to quiet the fears of any doubting Thomas as to the exclusive use of alkaloidal medication.

As to the statement of my friend, that in severe cases he can only rely on the old-time galenicals, the idea seems preposterous to anyone who has suffered the excruciating agonies of uncertainty engendered by the use of tinctures as obtained from the whole plant. The relief from these tortures brought by the advent of dosimetry is too real to be easily forgotten.

I might be induced to give again to my patients tincture of digitalis, aconite or belladonna, for instance, but that would be in a place where it would be impossible to obtain their active principles and with the desperation of the drowning man grasping at the proverbial straw. But no straw for me if a life-buoy is at hand.

I fear the same old story must be repeated again and again, that dosimetry favors active-principle medication where this is possible, because the active principle represents the remedial value for which the whole plant or its tincture is prescribed. It matters not whether this principle be an alkaloid, glucoside or a neutral body. By prescribing the active principle we get the benefit not only of a minimum dose but we get purity and certainty of action, which is of by far the greater value both to physician and patient.

A tincture may contain several active principles, it might be rich in that active principle whose effect is desired, then we are to be congratulated, i. e. if there is no other. But it may contain other active principles which will neutralize the action of the first; or it may be poor in that particular active principle desired, or there may not even be a trace of it in that particular tincture which our patient receives.

There is altogether too much uncertainty, too many "mights" and "might-nots" about tinctures to suit me or my patients.

Is it not better to prescribe atropine than belladonna tincture when the effect of atropine is desired? Why should your patient run the risk of meeting the host of companion active principles as contained in digitalis by prescribing its tincture when only the effect of digitalin is desired?

But undoubtedly my friend, the doctor, did not get the desired result from one single granule of aconitine when three or four should have been administered. If the doctor only would give "dose enough" and keep watch, I am sure he would never think of falling back on the galenicals. He also might not know what beautiful help can be obtained

by the cleaning-out method which is a part of dosimetric practice. There is a chance of active medication to act in the right direction when the alimentary tract is clean and wholesome, as there is then no waste of energy.

To resume, I will say to my friend that dosimetry is not a new school. It is a progressive step in an old one. As progress leads to perfection, so dosimetry is a step to the greater perfection in the art of healing. Medical science as it stands today is far from being an exact science; but dosimetry is the first step toward making it so, commencing with exact classification of exact remedial agents as found in active principles, and leads direct to exact diagnosis.

It calls for continuous work and eliminates the routine doctor, and if we, as the pioneers, work hard for the benefit of those that follow, who will reap the harvest of our work? Our followers can never know the intense satisfaction which is ours when we, with the help of exact medication, snatch from an untimely grave a loving mother or a hard-working father, when with the use of the old galenicals bereft and mourning orphans might have been our only reward.

A. R. Hollman.

Xicaltepec, Ver., Mex.

CARBOLIC ACID IN CARBUNCLE

A man, sixty-three years of age, a general helper in the railway shops, came to me with a large carbuncle on the top of his head near the junction of the coronal and sagittal sutures on the right side. I applied pure carbolic acid until all the tissues were white—then with curved scissors cut down and dissected till it bled freely. Then, removing the blood with absorbent cotton, I made further application of pure carbolic acid, repeating this till a complete dissection had been made clear down to the scalp. The hole was filled with powdered acetanilid, covered with absorbent cotton, and held in place by a few turns of rolled bandage.

Every day the man returned after working hours, when I took off the dressing, applied a little carbolic acid and the dry dressing. In a week he was well. There was no suppuration and no pain except on dressing the sore. The first application of phenol was painful for half a minute. The July weather here was very hot. The car-shops are hot places to work in, and yet this man with a carbuncle as big at the base as a half-dollar has been able to work every day, has had no pus nor pain, and made a perfect recovery.

C. S. Cope.

Ionia, Mich.

"DRUGLESS HEALING:" A COMMENT

I am in receipt of your September issue and wish to express my opinion about the article of Dr. Eli G. Jones of Burlington, N. J., "Drugless Healing vs. Medicine in the United States." I first wish to say that I fully agree with the editorial comment.

Dr. Jones, however, in his enumeration of the possibilities of the relief of the situation, omits three very important points.

The first is, that physicians should make themselves more familiar with all forms of mechanical treatment and if they are not able to execute the same, they should at least be in a position to prescribe them intelligently.

Second, there is a great number of capable men and women who have studied mechanical treatments at legitimate schools. These men and women work absolutely under the direction of physicians and should be patronized by members of the medical profession for such mechanical treatments as they cannot execute themselves, either on account of time, experience, or facilities required.

Third, our medical schools should incorporate in their courses of instruction various forms of mechanotherapeutics, in order to make the medical student familiar with the various benefits derived from properly prescribed mechanical means, and, by practical demonstrations and theoretical lectures stimulate the interest in a legitimate branch of medicine, which at the present time, unfortunately, to a great extent, is in the hands of quacks.

Too little attention is paid by the average practician to the benefit derived from electric, hydriatic and gymnastic measures, and massage; and even if the physician realizes their value and importance, the execution of these treatments is frequently entrusted to practicians of these branches without investigation of their fitness for the work, while most of the European universities in the last decade have found it necessary to add chairs of mechanotherapy. I believe, in the United States there is no university that gives instruction in all its various branches, though in many medical colleges some of the branches are being taught.

If the advocates of these drugless methods draw the attention of the public to their mode of treatment by their literature, then the regular medical journals ought to admit to their columns articles from capable writers on mechanical treatments, and thereby stimulate the interest of the profession to a more careful investigation of what drugless methods frequently can do.

In the institution under my supervision 9109 mechanical treatments were given in the year 1908, upon the request of physicians only. This shows you the support a legitimate institution can enjoy if absolutely ethical work is done. Such institutions will, most certainly, be one of the strongest means of combating the illegal practice of valuable branches of therapeutics by unscrupulous and unqualified men and women.

MAX J. WALTER.

Philadelphia, Pa.

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[Mr. Walter is at the head of the Pennsylvania Institute and School of Mechanotherapy, a most meritorious institution, located in Philadelphia.—ED.]

WHEREIN WE ARE ENABLED "TO SEE OURSEL'S AS ITHERS SEE US"

In September CLINICAL MEDICINE Dr. Eli G. Jones has an article on "Drugless Healing vs. Medicine in the United States," which he heads with a little couplet from Burns:

"Oh wad some power the giftie gie us,
To see oursel's as ithers see us!"

If it will interest the regulars to get a glimpse of how "others see us," the following should be interesting reading.

Personally I have had little occasion to call on doctors, but members of my family have experiences that emphasize the need of the "regulars" heeding Dr. Jones's suggestion that they make use of everything that will cure, wherever it comes from.

In 1893-94 my mother suffered seriously from the effects of grip, gradually running into heart failure. Four or five regular physicians declared there was no hope of her getting better, and that she would drop off suddenly from some little excitement; that all we could do was to keep her quiet, and give her a little digitalis to stimulate her heart.

In the winter of 1894-95 my sister made the acquaintance of a preacher who had been cured by a system of living and exercise, which was largely a mind cure, though it regulated the diet and did away with tea and coffee. Mother was so low that she could not walk out of the house, yet when her medicines were hidden and she was put on this system of living, in three months she was in good health, and she lived for twelve years, dying at the age of 77.

One of my sisters had catarrh so badly that it affected her hearing. She had treatments from all the local physicians, and then went to Chicago to a specialist, but all without beneficial results.

She then went west, hoping that the climate might benefit her. She at first improved, but soon was as bad as ever. She was in despair over it, as she was losing her hearing, which would stop her work as superintendent of schools. Hearing of a certain institute of suggestive therapeutics, she went there as a forlorn hope, but without really expecting to be cured. In two weeks her catarrh was all gone, and more, she has never been troubled with it since.

About twelve years ago my wife sprained her knee very badly, and it was six months before she could walk without two canes. The knee was weak ever after, and on several occasions she was on crutches for one to three months with it. Finally in the spring

of 1908 it gave out again, and she was on crutches. I at once determined to try the mind cure on that knee, and sent her to a well-known institute. After her second treatment she went out walking about the city, and continued to walk miles every day. She stayed there two weeks, and then returned home with a sound knee that has not since shown the slightest sign of weakness, and has not for a moment been favored, but used just as if it had never been weak.

In employing physicians, in the above cases, I have called in regulars, homeopaths and osteopaths. All were equally useless.

What would you think if you were looking at things from my view-point?

As I see it, the trouble with doctors of all schools is that they try to travel on one rail; they will not see anything good in any other system of medicine but their own. They remind me of the youth who had been told that the way to pull a drowning man out of the water was to grab him by the hair. On his companion falling out of the boat, he might have grabbed him by the seat of the pants, but that was not the proper way —it was not regular—so while he was trying to get the fellow by the hair he went down and stayed down.

To my mind, the thing for the regular school to do, is not only to accept and use the good things in medicine that any other school proves good, but to turn in and teach and practise suggestive therapeutics. Then in connection with it, use what drugs and surgery the case may call for, and they will not need to work unjust legislation against the other fellows, and they will cure a lot of people that now go to those fellows.

Almost invariably the local doctor has the first try, and if the case goes elsewhere, he has no one to blame but his own stupid obstinacy that prevents his being up to date.

E. B. Parkhurst.

Moline, Ill.

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[We do not know how this copy of Clinical Medicine fell into the hands of this good brother—a layman. He is not on our subscription list, which is limited to medical men. Certain it is, however, that he has found a flaw in our armor and his weapon of satire has struck home. There is no doubt that thousands of patients drift into the offices of irregulars because regular physicians have failed to rise to the possibilities of successful treatment, or have made woeful blunders in diagnosis. Take Mr. Parkhurst's mother, for instance. This was, in all probability, a functional derangement of the heart, essentially temporary in character, needing but a well-nourished body and a cheerful mind to set it right. The "irregular" met the indication to which the regular had been blind.

Whatever the disease, let the patient once become powerfully impressed with its seriousness, its incurability, and it becomes intractable in character and chronic in course. Any system of treatment which is hesitating and uncertain in the hands of the attending physician is almost inevitably doomed to failure. In such cases the positive statements and amazing self-conceit of the mind-curist will bring relief in cases where what usually passes for real science has failed.

So far as the physician is concerned the remedy is, of course, *knowledge*. That does not mean, necessarily, more knowledge of disease; rather *individualizing*—its personal and direct application to every single patient. It is the careless, "routine" examination, and the helter-skelter prescribing of "recognized" remedies in "official" dosage that send him to the "irregular." If we really would *do our very best* on every occasion, in a broad-minded, conscientious way, the inroads of the quack would not worry us very much.

There is no reason why the regular physician should not be a far better "suggestive therapeutist" than any wild-eyed and long-haired crank. A little attention to modern psychomedical literature, the perusal of books like Dubois' "Psychic Treatment of Nervous Disorders," would make him so. Yet I feel that a little more thorough mastery of *medicinal* therapy, combined with the essentials of the physical methods and a good fund of common-sense and human sympathy will help the average practician more than anything else in the long run. The best

things usually lie nearest at hand. We are too ready to be led astray by the remote and indefinite theorizing of modern, made-in-Germany, medical science, thereby wasting time far better spent in studying the action of the remedies which we handle every day that we live—and yet know almost nothing about.—Ed.]

THE PRACTICE OF MEDICINE

To practise medicine means to perform or use habitually or experimentally a drug possessing or reputed to possess curative or remedial properties. As we all know, sickness among all races of mankind is universal, and, as in the case of the poor, it always will be with us in a greater or lesser degree.

Medicine means *drugs*, and before Galen and during his time and up to the present time drugs have been used for the relief of the manifold sufferings and cure of the diseases afflicting mankind. Still, although many and many cures were effected, the percentage of failures also was great.

It must be admitted that frequently the cure of certain affections was and is being accomplished without drugs, and since the practice of medicine is a profession it should be judged by the best that is in it, and therefore it is necessary for the physician to comprehend properly the art of medicine and make it his business to learn all he can about the remedies he administers or prescribes as to their physiologic and toxic actions, also their antidotes if the remedies are poisonous ones, and the minimum and maximum dose, so you will be enabled to push each to its full physiologic effect when necessary.

I here recall what has repeatedly been said in The American Journal of Clinical Medicine: "Give dose enough to secure full effect, then less often, as required." This is very important, because without the full knowledge of the action of the drug given it will be impossible to use it with success. In the days of our preceptors, and even nowadays, frequently drugs are prescribed by physicians without a realization of their full action. Also, while a few are striving to learn all they can about the various symptoms and physical signs by which they can correctly diagnose the disease at hand, the greater number have been indifferent in learning to observe the most important symptoms, which, if they had been recognized early in the disease, would have enabled the physician more successfully to bring his patient under the proper remedy for his or her cure and relief.

The physician who seeks after the truth should make it his business to take a course in a first-class postgraduate school, now found in all the larger cities of the United States. He should take this course every year or two, according to circumstances and his financial conditions, in order to refresh his memory and learn new methods in diagnosis and treatment, in addition to taking laboratory courses in clinical microscopy and chemistry, including histology and pathology.

A physician who has done this will be able to diagnose successfully and treat disease with success. Therefore it behooves all those who possibly can to wake up and take notice and not stay in the same old rut any longer but to get busy and look up and get the best up-to-date literature upon diagnosis and treatment, thereby refreshing your memory and learning modern methods of diagnosis and treatment, not forgetting the postgraduate course before mentioned.

However, when studying the remedial action of drugs do not waste your time upon the old-fashioned decoctions, infusions, fluid extracts, tinctures and such, for they all contain a variety of different alkaloids and glucosides having just as many different actions, and are unreliable and uncertain, but rather try to learn all about the positive drugs and their action and doses, that is, the alkaloids and other active principles which give you positive therapeutic results. For, remember that these active principles, when thoroughly understood by the physician, will be a power for good in his hands and will give him positive results with a greater percentage of cures than he could ever hope to attain with the old-time galenics; and moreover, they are much more easily taken than the nasty nauseating mixtures and brews of bygone days.

Is it any wonder that quackery in all its forms, such as osteopathy, Christian science, and all the other swindles too numerous to mention, are doing a thriving business, getting the money that by right should go to the doctor? This, let me tell you, is due to the patients having to go from one doctor to another who are careless and indifferent in the diagnosis of their ailments and therefore not applying the proper remedies, while in many cases prescribing for the patient some nauseating mixture of which the smell and taste alone is enough to disgust him.

Therefore, dear brethren, wake up and seek after knowledge, and learn all about positive medication and correct diagnosis so that you may get positive results and cure all your curable patients. Then see your practice grow and the quack compelled to pull up stakes and depart. Thereby you will also help to redeem our honored and noble profession from the slurs and doubt cast upon it, because of the quacks and those that do not believe in medicine in any form, such, for instance, as the therapeutic nihilists of these days—the men who are therapeutic nihilists because they are so far stuck in the mire of unbelief that they cannot get up manly courage enough to cast out the darkness from their befogged brains and take action to whip it into activity of modern ideas, so they may see the great searchlight that is not far off that will in the near future redeem our noble profession and put it where it belongs, at the head of the column of positive therapeutics by reason of the cures affected with the most positive drugs, the alkaloids. Therefore, rational men of rational minds, is it necessary for the complete orientation of yourselves that you become successful practicitioners of positive therapeutics.

W. F. RADUE.

Union Hill, N. J.

UNITY VS. NON-UNITY OF DRUG-ACTION

It is a matter of regret that much of the discussion of the above-named topic, between Dr. Aylesworth and myself, has degenerated into a war of words, chiefly centered on the meaning of "action" and "effect." Dr. Aylesworth seems to be unable to discern that the cause of action and effect are but two inseparable equivalents of the same phenomenon, nor to conceive the vast difference in action and effect, or sequences of the operation of different quantities of the same thing. To him quality is everything, and quantity nothing. To him the force of gravity, whether it causes a small stone to hit a man and bruise him, or whether ten minutes later it beings down tons of earth and crushes or paralyzes him, is all the same action. To him a ripple in a rill is the same as the huge fall of water over the Niagara precipice; or the sliding-down over a cellar door as a Swiss avalanche. No one is bold enough to question the fact that the nature and quality of the active force in all these phenomena is not the same; but that is far from giving assent to the proposition that the action (let alone the effect) is the same in all of them.

In his definition of *action*, John Stuart Mill (Logic, Vol. I, Chapter III, pp. 71–72) says it is "not one but a series of two things: the state of mind called volition, followed by an effect. The volition or intention to produce the effect is one thing; the effect produced in consequence of the intention is another thing; the two together constituting the action." This is a very lucid analysis of the meaning of action, so far as it pertains to physiology, but is no less strictly definitive in a physical sense, viz., that action is a twofold process and implies an exerting force, *plus* the consequence of its exertion; or in other words it accords in every particular with the fundamental principle that cause and effect are equal.

Applying this definition to the subject in dispute, *action* means, that a therapeutic force, like strychnine, for example, has a certain action, and that a larger quantity of the same force possesses a different action. Dr. Aylesworth seems to think that such a conception is inconsistent and absurd, inasmuch as it involves the idea that the "force had changed between the two occurrences," i. e., between the operation of the small and larger doses. The nature

or the quality of the force is exactly the same, but the degree, or quantity of the same is altered. It is the quantitative element of this problem that Dr. Aylesworth has entirely overlooked or ignored, and which has led him into the snare of making such extravagant, unwarranted and monstrous assertions as the following, that "if any drug acts as a stimulant at any time it must always act as a stimulant," and that "overstimulation and paralysis are the same"—terms for neither of which an equivalent or a representative conception can possibly be formed.

A study of the intimate nature of drug-action is an interesting field, but if we expect to interpret its hidden meanings properly it must be approached in a broad and liberal spirit, unincumbered by unbendable and iron-clad preconceived theories; and while I trust that Dr. Aylesworth and I have succeeded at least in awaking renewed interest in this subject, and while a great deal more might be said in behalf of the view I barely outlined, I think the controversy has extended far enough, and agree to consider it a closed chapter.

THOMAS J. MAYS.

Philadelphia, Pa.

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[In order to bring this discussion to a close, proof of Dr. Mays' article was submitted to Dr. Aylesworth, who comments as follows: "In the above Dr. Mays admits all I contend for when he says, 'The *nature* or the *quality* of the force [in the large or small dose] is exactly the same.' The rest of his sentence is a plain truism. I am content." The discussion has been an interesting one. —ED.]

PERNICIOUS MALARIA IN CHILDREN

At this season of the year it behooves southern doctors who are located in malarial districts to keep their eyes and brains alert for the pernicious types of malaria. After ten years' practice I feel like giving my experience in the following type of malaria, occurring here in middle Texas, mostly in children from one to ten years.

It is no uncommon thing to be called to a child who has a history of slight fever the day before and find the following clinical picture of a pernicious type of malaria: High temperature (103° to 106° F.), a very rapid, thready pulse, extremities cold, respiration labored and rapid. The patient is very restless. The tongue is typical, edge coated white and end very red; the gums also very red and of course mouth very dry and breath fetid. Vomiting may be persistent. If old enough and not too far gone the patient will tell you that he is cold, that his head hurts, and his back, and belly—in fact that it hurts all over.

The main indication for treatment is to eliminate waste products and arouse secretion, equalize the circulation and lower temperature. Cinchonize the patient at once.

I generally give strychnine and atropine hypodermically. These strengthen the vital powers and throw the blood to the surface, thus relieving the congested internal organs. If the heart wavers I give digitalin. *All "to effect."* Elimination is most important. Give a high enema of normal salt solution, cleaning out the lower bowel, stimulating the upper bowel, thus getting rid of a load of poison. It is very important that this be done early. Give large doses of calomel and a saline laxative or castor oil at once, and keep giving them until you get results. Liver and bowels acting well, I give quinine hydrochloride hypodermically and immediately, enough to cinchonize the patient.

There must not be another paroxysm. Hot-water-bottles or hot stones should be put to the extremities, and ice to the head to control temperature and guard the brain. Salol or the sulphocarbolates should be given as soon as the bowels move well; oil of turpentine with both.

Persistent vomiting may call for a good fly blister over the stomach. Atropine helps here. Usually, however, the nausea is not relieved until the liver is aroused and the socalled "bilious actions" are passing. I wonder sometimes how so much poison and filth can accumulate in the patient, and I can say here that it is a very rare thing for one

of these patients to die after elimination is well accomplished. Autotoxemia goes hand in hand with this disease.

In the gastrointestinal types of malaria we have of course a catarrhal condition of the mucous membrane lining the entire intestinal tract, and during the dry stage of this inflammation the bowels are very sluggish or will not move at all, regardless of what is done, until the second, or moist, stage of the inflammation occurs. There is also a perverted function of the nerves supplying the muscles of the bowel, thereby affecting peristalsis. When they do lock up "*keep a trying.*" Use your high enemas; give your quinine, strychnine and atropine to effect. I give the laxative salines, as I believe that they have a better chance of operating.

Sedatives are given as nedeed. I also find use for veratrine and aconitine. The hot-pack, cautiously employed, will help to eliminate poison.

I wish to emphasize the importance of doing something for these little patients *at once.* I believe we country doctors can do great good by teaching our patients (and they are generally our friends and will listen) prophylactic medicine. Tell them to "rake and burn", use oil on standing water, screen their homes, get free drainage, and admit plenty of air to the living rooms day and night.

Most of this is bedside experience, some of it learned "on the forks of Bitter Creek." If it helps even but a little I shall feel well repaid.

W. G. Williams.

Cross, Tex.

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[In our opinion Dr. Williams has given the keynote to the successful treatment of these cases of malaria. While we all admit the importance of early and effective cinchonization, we do not appreciate the part played by the intestinal tract. As the doctor has so clearly pointed out, in these cases the bowel is a stinking cesspool. If we can clean it out thoroughly and get it into a more normal condition the first part of the battle —and the most important part—is won. Followed by intestinal antisepsis, quinine (small doses of the arsenate or hydroferrocyanide will ordinarily do) and proper supportive measures, recovery usually promptly ensues.—Ed.]

A NEW USE FOR CALCIUM SULPHIDE

The field which the sulphide of calcium occupies in medicine is large and increasing. Accidentally I have discovered that it rapidly relieves many cases of indigestion of various types. Recently I have exhibited it in half a dozen cases with happy results. I give from 3 to 4 one-sixth-grain granules after meals. There seems to be a direct connection between its exhibition and the excretion of indican by the kidneys, especially after a clean-up treatment. I suggest that you give it a trial.

Should any of the "family" have under treatment cases of indigestion which have not been benefited by the usual remedies, such as pepsin, pancreatin, creosote, etc., I suggest that this agent be given and reports be made thereon through The Journal of Clinical Medicine. Of course these few cases do not warrant the assertion that the sulphide is a specific, as it is in other diseases, but the great benefit in these cases is very suggestive and does warrant further clinical investigation. In one, a lady 70 years of age, who is the subject of mitral disease with anasarca and general edema, great difficulty was experienced after the ingestion of any character of nutriment. Nothing gave relief until she was placed on the sulphide.

W. V. Taylor.

Olla, La.

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[Dr. Taylor's suggestion aptly illustrates one valuable feature of this journal—a clearing house for clinical observations. Dr. Taylor has made one such that may be of value. The remedy has benefited his patients. Will it aid other such cases, in other sections? How far may this use of the sulphide be extended? What forms of gastric derangement does it best suit? Out of the large number of readers there

will be some who will try the idea, and as they report results, the truth will gradually be established.

Really this remedy has not received half the study it deserves. We thought we knew something about it, but its possibilities were never brought home as strongly to us as they were on reading Dr. Ussher's article, published in a recent number of *The Medical Record*. We reproduce it on another page of this issue.—Ed.]

DRUG-PLANT IDIOSYNCRASIES. AFTER-PAINS

Why not stir up a discussion of various medicinal plants, such as English primrose, dogwood, poison-ivy, etc., that act so peculiarly on some? I am only a beginner and so can appreciate the trouble they might cause one who didn't know about them.

Primrose seems most frequently to cause general edema of the face with not much pruritus but considerable systemic effect.

Dogwood seems to cause a more localized and so much more intense inflammation, which in two recent cases went on to suppuration, in one putting a functionating breast out of commission permanently as the woman refused lancing.

The action of poison-ivy is familiar to all, as is the lengthy list of remedies. What else can one do than eliminate and apply antipruritics? Doesn't someone know a remedy that can be depended upon every time?

You say, give caulophyllin hourly during labor and there will be no after-pains. I gave it once in a case of rigid os, repeated in six hours, giving two doses only, and went away for an hour. When I returned there was the baby waiting to have the cord tied! The irate father shook his fist in my face and said: "Next time you give those little black pills you stay around." Well, to come back to the point. I gave it as usual, every half-hour as it was a rapid labor the other day and there were terrific after-pains. The uterus was clean, as I had cleaned it out while the mother was coming out of chloroform. The pains did not yield to Buckley's combination, with some pulsatilla, but did to a chlorodyne tablet or two.

I have given cactus with strophanthin in varying proportions in a case of bad mitral insufficiency with Bright's disease, for months. The patient had been given up to die by all the other men. Now she is getting uremic delusions, turning on those who have cared for her. Heretofore caffeine citrate has taken down the edema when it got noticeable, but it made her wild. Diuretics are too hard on her stomach.

Sterling Barrows.

Amherst, Mass.

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[By all means let us have a discussion of the English primrose, dogwood, poison-ivy and some of the other plants. For a long time we have been trying to draw out the experiences of our readers concerning our American vegetable remedies, but with rather scant results. We hope this request from Dr. Barrows will prove more productive.

We were interested and amused with your experience with caulophyllin. It certainly acted efficiently enough in one case, and that success should take a little of the "curse" off of its failure in the second one. We certainly do not mean to carry the impression that caulophyllin is an infallible remedy. However, it is an excellent preparation and does much good in after-pains as well as during the preparatory stage of labor. There are, however, after-pains so severe that very powerful anodynes are needed to give relief. Of course, that's the experience of every physician.

The special field of indication for cactus seems to be the functional cardiac disturbances—the too rapid or the too slow heart, cases of arrhythmia, tobacco-heart, etc. In such conditions, in our experience, it works admirably. We have personally tested it out again and again with the sphygmograph and *know* that the results which are produced with it are not figments of the imagination.

In a case of mitral insufficiency digitalin or sparteine sulphate would be my choice—and by the way, Doctor, if you haven't tried sparteine in cases of that kind, where you want both the cardiac-tonic effect of digitalis

and the eliminative action of veratrine, try sparteine, but give it in the larger doses (1-2 to 2 grains) as recommended by Pettey.—Ed.]

THE SKELETON IN THE CLOSET

A skeleton crouched in a closet dim.
The closet was dark, but 'twas naught to him,
For he'd been hid in that closet away
From the sight of men and the light of day,
Till his bones were moist with a slimy mold,
And they did not clank as loud as of old.
Nor did his thin fingers snap as of yore,
Nor his ghastly grin seem as grim as before,
While the hollow sockets within his skull
Gleamed with a gleam that was growing dull,
And the toothless jaws were clinched and still,
And he could not speak, how much he might will.
Still he wished some person with eagle eye
Might ferret him out while passing by,
And dragging him forth to the light of day,
Force him to give all his secrets away:
How he'd murdered men for paltry gold,
Or how by treachery friends had been sold,
Or how by intrigue, by crime or by theft
Thousands of fond hearts of joy were bereft,
Or of broken vows, and trusts often made,
Of trampled honor and virtue betrayed,
Of a blasted home and a broken heart,
Where the villian played his loathsome part,
Of promises made that never were kept,
Of toiling fingers and eyes that wept
Over erring ones but named with a hush,
Or whose very remembrance brings a blush.
And as he thought all his dark secrets o'er,
A gleam lit his eye and shone as of yore,
And he snapp'd his jaws like a castinet,
And rattled his bones so moldy and wet,
And he thought to himself, that after all
There might to him still worse befall,
Than in a skeleton closet to stay,
From the sight of men and the light of day.
And maybe 'twas best that he should be
Hid away where no prying eyes might see;
For if he were ever to see the light,
It would surely turn things topsy-turvy quite,
And disturb society, church and state,
And bring the world to an awful fate.
So he crouch'd low down in his closet dim,
While his face reassumed its look so grim,
And resolved to keep all his secrets fast,
Locked in his skull. till all danger was past,
And hold his peace, like a skeleton may,
And hide in his closet till Judgment Day.

H. C. Bennett.

Lima, Ohio.

GOOD WORDS FROM BOLIVIA

It gives me pleasure to say that in my personal opinion The American Journal of Clinical Medicine is the journal in which I have found a more abundant variety of information useful to the doctor engaged in general practice than in any other that has come into my hands. If fully carries out the idea indicated by its title.

During the several years that I have been a subscriber to it, I believe one of the most important features has been the great number of personal ideas and experiences contributed by different readers, the diverse, independent and occasionally conflicting viewpoints of the contributors affording excellent suggestions for thought and study in therapeutics and treatment.

Charles W. Foster.

LaPaz, Bolivia.

FIBROLYSIN IN OPTIC NERVE TROUBLES

Replying to the question of Dr. Rice in the October number of Clinical Medicine, I would say that I have never employed fibrolysin in inflammation of the optic nerve (though often for corneal opacities) but have frequently used dionin (which has a similar effect) in the later stages of the disease mentioned, and with the happiest results. Fibrolysin, judging from its general action, should be equally valuable.

With the chromium sulphate I have had no experience at all. I find no mention of this drug in the literature available to me, even in Dr. Casey A. Wood's "System of Ophthalmic Therapeutics," which is well-nigh exhaustive. Has Dr. Rice himself employed chromium sulphate? If so will he not kindly tell me how and with what effect?

T. H. Shastid.

Marion, Ill.

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[For the information of Dr. Shastid we "rise to remark" that chromium sulphate was highly recommended by Dr. Louis Kolipinski of Washington, in a paper published in *The Monthly Cyclopedia and Medical Bulletin*, September, 1908. An editorial abstract of this article appeared in Clinical Medicine, May, 1909, page 381. Kolipinski used it with excellent results in exophthalmic goiter, neurasthenia, chronic alcoholism, migraine, locomotor ataxia, etc. Its mode of action seems obscure. We have received

some good reports concerning it, one of which, at least, we shall publish next month. If any of our readers have given this remedy a careful trial, will they not let us know?—Ed.

THUMB-NAIL SKETCHES

The telephone rang an imperious call and a voice spoke out in the early morning light: "Doctor come and help me, have been up all night—primipara—can't deliver, bring your Torrey attachments."

Hastily repairing to the scene of action I found a small woman, large head of child presenting, dry labor, parts swollen, everybody tired out. Placed forceps with axis-traction handles and made rapid and safe delivery.

The placenta remained in situ. I told the physician not to trouble it but to "bide a while" and allow the woman to rest. By this time the nurse had cleaned up my forceps and I bowed myself out. An hour later while at the home of a patient I was implored by a frantic voice through the phone to come quick as Dr. Blank wanted me at once. Without having to be told I knew that he had endeavored to remove the placenta and was having postpartum hemorrhage.

Going rapidly to the house I found just this condition. The doctor was on the bed on his knees, one hand outside the abdomen of his patient, the other hand inside the uterus. The patient was almost bloodless with the blood running out between the doctors' fingers as he strove with digital manipulation to get contractions. Hastily emptying his hypodermic from which he had given several doses of aseptic ergot, I dissolved 1-50 grain of atropine in 15 drops of water and gave it hypodermatically. In a few minutes the finger nails began to show pink, the colorless lips took on a faint flush, there was a sighing respiration and the blood that was left remained in the capillaries. The hemorrhage ceased and the battle was over.

My first visit saved the baby.

My second visit saved the mother.

This was six years ago. That doctor now is an ardent advocate of atropine in particular and of the alkaloids in general, and carries an alkaloidal case.

C. S. Cope.

Ionia, Mich.

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[Thank you, Doctor, for this interesting report. Will others not add their experiences?—Ed.]

CHRISTIAN SCIENCE: AN ANSWER

In your issue of May, 1909, you publish an article by Dr. Kiernan in which he discusses "Pregnancy by Mental Impression." He says: "This spiritual method of producing parthenogenesis (virgin generation) naturally looms up in Eddyism—that marked reversion to primitive demonology. Parthenogenesis according to 'Mother' Eddy may result from 'malicious mesmerism' or 'spiritual creativeness.'"

This erroneous rumor is probably due to the fact that a well-known clergyman in an attack upon Christian science has issued the statement that, "the proof is abundant that Mrs. Eddy taught her students that women today can bear children as did the Virgin Mary, without a human father." This man has been challenged to produce the names of the persons who he alleges have made such a claim, but he has failed to do so.

I desire to state in unmistakable terms that neither Mrs. Eddy nor any consistent Christian scientist has ever taught or believed any such nonsense. In "Science and Health," page 68, Mrs. Eddy declares: "I never knew more than one individual who believed in agamogenesis; she was unmarried, a lovely character, was suffering from incipient insanity, and Christian science cured her." She adds: "The perpetuation of the floral species by bud or cell division is evident, but I discredit the belief that agamogenesis applies to the human species."

In "Retrospection and Introspection," page 85, we find the following statement: "We do not question the authenticity of the Scriptural narrative of the Virgin Mother

and Bethlehem babe, and the Messianic mission of Christ Jesus, but in our time no Christian scientist will give chimerical wings to his imagination, or advance speculative theories as to the recurrence of such events.

"No person can take the place of the Virgin Mary. No person can compass or fulfil the individual mission of Jesus of Nazareth."

These quotations completely refute these silly allegations. I would add that Mrs. Eddy's writings contain all that she ever taught in private.

ALFRED FARLOW.

Boston, Mass.

IN RE INTESTINAL ANTISEPSIS

I am certain that your position is absolutely correct in this matter. I am not a convert to your teaching, but you have done much to confirm me (if it were necessary) in my belief in the importance of intestinal antisepsis. My early teaching, especially that of my preceptor, was dominated by the practice of Sir Andrew Clark, i. e., locking the bowels by opium and so forth in cases of peritonitis; yet I soon ran foul of practicians of another school of practice that I had to compete with in the neighborhood where I was located, viz., the eclectics and other "irregulars," who made me doubt very materially the correctness of the no-physic rule, especially when treating intestinal diseases in children.

I soon learned that it would not do to lock up the secretions in that class of cases. I learned to give castor oil and epsom salt to clean out the *primæ viæ* and to supplement the work by gray powder and calomel as well as by the neutralizing cordial of the day. But it was a groping in the dark, so far as having a reason for my practice in giving calomel, because it had a bad name in the neighborhood. I gave it clandestinely, and was always afraid that cancrum oris would supervene and that I should be accused of "eating up the face of the little patients by calomel;" yet I gave it off and on.

It was not till 1886, when Dr. D. N. Kinsman of Columbus, Ohio, read a paper on "Intestinal Antisepsis," before the Ohio State Medical Society, published in the seventh volume, page 5, of the American Medical Association *Journal*, that I had a reason for the faith that was in me. Dr. Kinsman made the subject of intestinal antisepsis so plain and convincing that I have never doubted the wisdom of the practice since. Bouchard's great work, "Autointoxication," had not yet appeared in English form, but Kinsman had seen "a critical review of it," he says, and quoted quite freely from its contents.

Dr. Kinsman, in discussing the time-honored and universal habit of administering a cathartic, spoke of the "supposed good reason for their administration by the simple means of sweeping out the intestines and stomach," and continued as follows:

"All this has been very satisfactory in times agone; but it is no longer sufficient for the demands of an exacting, if not an exact, professional science. Among cathartics, mercury in some form has recently held the first place, because it was easily administered, prompt in action, and more certainly followed by good results than any other agent of this class." He gave a scientific reason for his assertions, saying: "We cannot hope to elucidate everything that lies in this direction, but we can perhaps blaze a way along which some wiser one will build a royal road."

He then took up the rôle that bacteria play in the process of digestion, and said:

"I think I shall be able to show that when digestion is not normally performed, it is fair to infer the anomaly does not depend upon variation in the quality or quantity of the gastric or other digestive fluids, but upon the subversion of the power of the normal by intense bacterial action. In other words, the process is no longer one of digestion, but of putrefaction. . . .

"But digestion in the intestines not only produces that which, by absorption, builds our bodies; but in like manner poisons are produced which, in the mysterious economy of nutrition are destroyed, when its processes are normal, or when they are disordered they accumulate and work mischief and

death. In the process of putrefaction poisons are elaborated which are deadly."

I am glad, Doctor, that the way that Dr. Kinsman blazed has been so well occupied by a man of your energetic push and ability to make in fact a "royal road" in the dissemination of the principles which you have chosen as your life-work, namely, "clean out, clean up and keep clean." I also hope that I have not said anything in these few rambling words to hurt your feelings, being hurriedly scribbled, just to show that I am not a clam, and to express the wish that you may "live long and prosper."

J. J. CONNER.

Pana, Ill.

[Same to you, Doctor, "you and your children, and your children's children!" The great doctrine of Bouchard, as seen and emphasized by acute and far-seeing clinicians like Kinsman and put into practice by you and me and many others, is too big for private ownership, and we are satisfied to help "pass it along." No feelings hurt! We are glad to join with you in doing honor to every thinking man who has eyes to see and a tongue to proclaim this vital truth.—ED.]

ALBRIGHT'S "RECTAL DISEASES"

The average practician has, for years past, been inclined to let patients suffering from rectal diseases drift into the hands of the specialist. Many men even decline to treat hemorrhoids, from the belief that such cases never get well unless operated upon. The injection method has been tried (half-heartedly it is true) and the results have, in so many instances, proved unsatisfactory, that the rank and file of the profession look upon the procedure unfavorably. As a matter of fact faulty technic has been at the bottom of most of the failures and the use of ineffective solutions has necessarily rendered other operations unsuccessful.

Existent textbooks do not afford much assistance to the man who desires to treat rectal diseases at his office. Radical procedures, necessitating several days' stay in bed and the services of a trained nurse, are described minutely, but the average physician is not prepared to perform extensive operations and, even if he were, the loss of time such measures would entail upon his patients would be an insuperable objection.

The man afflicted with proctitis, fistula in ano, fissure, hemorrhoids or rectal ulcer is ready to pay any reasonable sum for a cure but, as a rule, he demands that treatment be carried out while he works, for not infrequently this is the only way the money paid the doctor can be earned. There is an eminently practical side to medicine and unfortunately the too "professional" man has ignored it, greatly to the advantage of a horde of quacks, advertising specialists and others of that ilk who realize that to get the public's money you must give (or at least seem to) just what the public wants.

Recognizing these facts and realizing that the doctor daily loses practice (and income) through being unprepared to treat successfully the more common rectal disorders by the ambulant method, Dr. John D. Albright of Philadelphia has produced an intensely practical book upon the subject wherein he gives, not only such a clear clinical picture of each disease that a mistake in diagnosis is almost impossible, but a definite description of those methods of treatment which have proven curative. An immense amount of work has been necessary to produce this volume, for from the first page to the last it contains never a line of theory but always definitely proved clinical and therapeutic facts which may be depended upon. Albright has, for many years, made a specialty of rectal diseases and his extraordinary success proves the efficacy of the treatments he recommends.

The author devotes several chapters to the consideration of proctitis, a disease which he considers extremely common and "responsible for the production of many other abnormal conditions, which in turn give rise to a train of symptoms that are regarded as distinct diseases." The description of this disorder in its subacute, acute and chronic forms is unique in its perfection and the text is supplemented with radiographic plates

showing the cavities and sinuses resultant upon a chronic proctitis which, all unsuspected, often exists in the tissues adjacent to the anus.

Albright insists that the recognition and proper treatment of proctitis will materially simplify the work of the proctologist; indeed, he states that "from his ability in this direction may be gauged the likelihood of his success".

To the best of our knowledge no other writer upon this subject has ever advanced the theories presented so convincingly by Albright, and it is a question whether up to this time the ravages wrought by the burrowing exudate from an inflamed bowel have been even suspected.

The physician has treated pruritus, fissures and what he has termed "proctitis," without realizing for a moment that the tissues surrounding the bowel may be absolutely riddled with sinuses or that an extensive cavity filled with the acrid exudate from a chronically inflamed bowel may occupy the ischiorectal space. Albright has found that such conditions exist to some degree in a very large proportion of patients suffering from rectal diseases and does not hesitate to state that many nervous and systemic disorders can be proved to have their origin in an unrecognized proctitis.

Having discovered and laid bare the condition, the author goes on to describe a comparatively simple and effective treatment therefor. Patients come to the office at reasonably short intervals and between times treat themselves at home; none of the procedures in any way interfering with their business pursuits.

The correct method of treating each variety of hemorrhoid is described so plainly and fully that any physician following directions *must* succeed. For that matter the volume deals with every disorder of the anus and rectum which *can* be treated, the patient remaining ambulant throughout; and it may be safely said that the methods recommended are the most effective and practical extant. The doctor desiring either to add to his income or undertake a specialty should procure Albright's "Rectal Diseases: Diagnosis and Treatment by Ambulant Methods." It is without question one of the most original and practically helpful books written for many a long day.

"WAS NEVER A FAIR WOMAN BUT WOULD STEAL HEARTS"

Yes, and they are "as vigilant as a cat to steal cream." In stealing hearts there's often honor in the theft, for that which is stolen is stolen from those who have been thieves themselves.

Nurses stealing? That, too, while the patient is moribund? Will graduate fingers steal?

Well, Cincinnati has seen two arrests of this kind recently. Nurses have an excellent opportunity, and some, it seems, cannot resist the temptation. Some have been known to steal "stealthily in the midwarmth of welcome" (Eneid), while others will yield to the temptation during the lonely night watch, "as the morning steals upon the night, melting the darkness" (Shakespeare). I am sure that stealing occurs among nurses only very seldom, but that it should take place at all is distressing. That it does sometimes occur is proven by the two above-mentioned arrests and also by the following true story which I am about to relate.

Here are "the King Boys" of Fulda, Minn.; in other words, Dr. Emil King and his hustling youngsters

I was called to attend a woman suffering from obstruction of the bowles. She had been under the care of another doctor but who had deserted her. She was no "silken son [daughter] of dalliance nursed in ease" (Gray), but was living in one room, in abject poverty, though not so poor as some, for she had one good friend. This was a "practical nurse," poor as herself, living in the adjoining room. She was a "born nurse," if there ever was one, exceptionally assiduous in her duties day and night. She did all, acting as day nurse, night nurse, cook, chamber-maid, doing everything. No quibbling as to hours or pay, nor fine division of "rights," and "duties." "Stern, rugged nurse, thy rigid love" (Gray) was unsurpassed. One evening I saw that we were soon to have results. I had business elsewhere and left the field to the nurse. That night the bed-ridden patient had about twenty-five evacuations and the only bedpan at her disposal was *The Cincinnati Sunday Enquirer*. She remained quite ill for some time and the nurse was faithful both to patient and physician. Never was a millionaire with day and night nurse, in full uniform and extra pay, more faithfully attended.

But one day I missed our nurse from her accustomed post near the bedstead. Inquiry was answered by the explanation that she had to go to court. The following day I found that she had failed to return, and anxious inquiry developed the fact that she was in jail. Seeking further information I learned that the nurse had been accused of stealing from a former employer and on trial was convicted and sent to jail.

Thereupon I went to Police Judge Lueders, related the instance to him, told how poor both she and her charge were, spoke of her faithfulness without a dream of compensation, and how she had doubtless saved that sick woman's life. I further assured him that this woman was worth too much in that sick-room to be lying idly in jail. The judge agreed with me, called the woman out of jail, gave her a good lecture, and told her that he would let her go on condition that she would return at once to this sick woman and care for her. She flew out of the police court as if shot out of a gun, and when I arrived at the patient's house she had everything cleaned up and the room and patient looking as if no nurse had ever been away for a minute—serving a jail sentence.

E. S. McKee.

Cincinnati, O.

"PEDIATRICS" CHANGES HANDS

Dr. W. E. Fitch, Editor of *Gaillard's Southern Medicine*, has purchased *Pediatrics*. This journal was established in 1896 by Dr. Dillon Brown of New York, and since its foundation has been the leading exponent of pediatric teaching in this country. It is the new owner's desire to make it the greatest and most helpful journal in the teaching of diseases of children in English or in any other language. The first issue under the new management will appear Oct. 10.

Dr. J. C. Bewick, Bewick, La., and his beautiful roadster

WAS IT INCIPIENT TETANUS?

On the evening of October 25, 1907, Mr. L., while sitting reading in a store, was accidentally shot by a clerk, the full load striking his wrist and breast. The shell contained (as I remember) No. 1 shot. Several shot passed through the wrist and some lodged in it; but the bulk of the shot struck

him in the chest, over the sternum, causing quite a large open wound.

Two physicians near at hand were called and administered to his immediate needs. I came later. All of the shot and particles of clothing were removed from the wound (supposedly) and the wound dressed antiseptically that night. I dressed the wounds the next day. He seemed to be doing well,

Dr. T. E. Hardaway, Camp, Ark., and his fine "saddler"

was up and had a fair appetite, rested some, but was somewhat nervous.

The next day the wounds looked well and seemed to be granulating. The patient was up and dressed; but by the third day there seemed to be too much heat and dryness about the wounds in the breast. He thought he would be better soon and really I did not see any danger. The next morning the wound in the chest was dry and he had difficulty in turning the head; the neck was quite stiff.

I made a careful examination of the wound and found a small opening leading under the muscles immediately over the ribs. Following this with a probe to beyond the central portion of the mamma I felt the probe touch a solid substance. I withdrew the probe, enlarged the opening, passed a urethral lamp and with the aid of the lamp removed some shot and some fragments of his coat or vest. I washed out the wound with a solution made by several proprietary-medicine firms, containing thymol, eucalyptol, menthol, baptisia, methyl salicylate, benzoin and boric acid, to which I had added one-tenth of one percent formaldehyde, using a baby-syringe. After washing thoroughly I dressed the wound with gauze, saturating it with the same solution. The next day the stiffness of the neck had disappeared. No more trouble followed and the wound soon healed.

Did the treatment prevent tetanus or was the stiff neck and other symptoms from some other cause? The patient himself expected tetanus, as he told me after the trouble was all over. I should like to hear from someone who has tried a weak solution of formaldehyde in threatened tetanus, if any have.

E. L. Cook.

Harlan, Ia.

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[It is impossible to make a positive diagnosis in this case, though certainly all the conditions favorable to the development of tetanus were present and the stiffness of the neck was suggestive. A bacteriological examination would soon have dispelled all doubt, for the bacillus tetani is one of the most characteristic and is easily recognized. Letting in plenty of oxygen, to every part of the wound (the germ cannot live in the presence of air), and the use of formaldehyde were both good treatment.—Ed.]

SOME ALKALOIDAL HELPS AND HINTS FROM PRACTICE

I am going to give you my experience along varied lines (all therapeutic, however), and you will receive a longer letter than you expected.

Crotalin.—Mrs. W. S., aged 28, fibroid pulmonary tuberculosis of about ten-years' duration. No sound pulmonary tissue to be found anywhere. Father and two brothers died of tuberculosis, mother tubercular, one daughter with lungs slightly infiltrated, and one son markedly strumous. This patient began to fail rapidly in March, 1909.

My treatment was with helenin, gr. 1-6, and an "antiscorbutic" combination (calx iodata, phytolaccin, stillingin, arsenic iodide nuclein), given every five hours, and heroin, taken when needed. Her secondary treatment was directed to the "clean-out, clean-

up and keep-clean" viewpoint. Although failing rapidly, she had no chills and fever, no night sweats, no purulent expectoration, and the highest afternoon temperature was around 101°F. Calcium sulphide, milk, cream and eggs were and are all distasteful to her and produce nausea; but for this fact, I believe she would be much improved. I believe the helenin was the main factor in preventing sweats and purulent expectoration; incidentally, helenin, gr. 1-2 every five hours, has markedly benefited chronic coughs, if bronchial or bronchiolar.

July 19 I gave crotalin, gr. 1-200. Pain was intense, lasting thirty-six hours; arm swelled. July 23 I gave 1-100 grain. Pain and swelling so intense that I have since given only 1-200 grain every four days. I also add a small amount of cocaine, which prevents the initial pain which made the injection dreaded. Cough and temperature remain about the same. Her appetite has been decidedly increased by the crotalin, so much so that I have hopes of a favorable result. What the final result will be I do not know—if a cure—surely, it's a good test of crotalin.

The "antiscorbutic" combination, referred to above, helped her strumous boy when no other drugs availed. He had an opening from the inner canthus of the eye to the palate, passing through the nasal cavity; also an abscess on the tibia.

Condurangin.—I could not see any beneficial results in my cancer-case treated with this remedy.

Emetine.—Dysentery requires only one visit since I have been using this. In babies I give one milligram every quarter-hour for one hour and then omit it for one hour and continue until cured, alternating the hours of dosage and nondosage. A baby of one year requires 1-3 to 1-2 grain (2 to 3 centigrams). No nausea results. To adults I give one grain, repeated in twelve hours. Have had nausea in two cases, or probably 10 percent.

Ergotin.—If labor-pains are slow, I give *very small* doses of this remedy every quarter hour until the pains improve. I prefer this to quinine.

Gelseminine, 1-250 grain every quarter hour to physiological effect, helps nicely to abort a rhinitis. Euphrasia and calx iodata are good synergists.

Nuclein solution, twenty minims hypodermically, changed a typhoid pneumonia, man unconscious, to the sthenic type. Respiration 48, pulse 135, temperature 101°F.; inside of one hour they became 48, 112 and 103°F. Aconitine and veratrine in combination by the next day produced a respiration of 32, pulse 98, temperature 99.3°F. Was discharged on the fourth day and patient went to work by the eighth day.

Podophyllin.—Dr. Gray's pill containing 1-2 grain podophyllin repeated every two hours to effect produces "quick cures", but frequently acts too strenuously. I have reached this conclusion, which I may modify with further experience: It is too strenuous for gastric or intestinal trouble, producing emesis and catharsis; for pulmonary or kidney troubles the big dose of podophyllin is preferable to a small dose.

Home, Auto and "Chauffeur" of Dr. M. M. Wickware, Cass City, Mich.

Personally, I can take one grain podophyllin with comfort, but the personal equation varies more with podophyllin than with most other drugs.

Sanguinarine nitrate is one of my dependable drugs. I can increase or decrease

cough at will where bronchial secretion is present with absence of bronchial irritation sufficient to clear out the bronchi. It works like a charm in exacerbations of chronic pharyngitis; in chronic eustachian catarrh it helps the hearing. I failed to find any hepatic action in my own self.

Sulphocarbolates.—Those physicians who claim that nausea follows the use of the combined sulphocarbolates should see my dosage. I have frequently given 20 grains every two hours for one week and have never seen any nausea. I have not been able to abort many typhoids, but I have in a few instances, in an epidemic of 1906. This past spring I had 17 cases and I know that I did modify the disease so that baths, packs and sponges were unnecessary because there were no high temperatures after the sulphocarbolates and dosimetric trinity began to take effect.

As, I believe, I told you in a previous letter, my class of patients is somewhat different from what the average physician has. In addition to my business clientage, I have about 400 foreigners of eight nationalities. The foreigner is not content to take small, frequent dosage; he wants quick results or a new doctor. I frequently give 2 ounces of castor oil, or one grain podophyllin, as a dose. In three and one-half years, with a foreign clientage varying from 400 to 600, there have been but five adult deaths in my practice (all in the Allentown Pennsylvania Hospital), four from typhoid and one asthenic pneumonia. I have lost six children, ages from three days to six months, two caused by toxic milk of a drunken mother and the other four probably preventable under better hygienic conditions.

I was graduated from college but four years ago, and yet, if I were debarred from using "dosimetric" medication and the ideas absorbed from your books and CLINICAL MEDICINE since graduation, I should be lost and hardly know how to practise medicine. I often wonder why it is that all dosimetric practitioners are so enthusiastic and so optimistic? I suppose it is because we feel we can accomplish things. I know that I am never or seldom at a loss what to do in *acute* conditions. I start cleaning out and treat conditions as present and make my diagnosis later, if necessary.

Though I have never seen nor met you, you can consider me one of your strongest admirers and an energetic coworker. My friends consider me an "alkaloidal crank" —"q. e. d."

C. J. PFLUEGER.

Fogelsville, Pa.

PODOPHYLLIN DOSAGE

In your fine editorial referring to my Canadian contribution you create the erroneous impression that I was responsible for excessive podophyllin dosage, when I clearly stated that above 4 grains was contrary to my authority and advice, while the immense doses were capricious or purely mistakes on part of patients or their families, for which I was in no way responsible.

ROBERT GRAY.

Pichucalco, Chiapas, Mex.

EXTENSIVE BURN COMPLICATED WITH RHUS POISONING

E. K., laborer, through the breaking of a plank used as a bridge across a tank of boiling water, in which logs are boiled previous to being shaved in the manufacture of grape baskets and small fruit boxes, was precipitated into the tank with two other laborers. The first went to the bottom, seven feet, and sank twice before he was rescued. The second, our patient, fell on top of him and went in sidewise, scalding both lower extremities to the crest of the ilium, and the left arm to midway between the elbow and the shoulder. The third was but slightly injured, scalding only one foot to the ankle. The first was literally scalded to death, living only four hours, and that under the influence of morphine and chloroform.

After the common first treatment in scalds to the second man, an unusual complication set in. Many of the logs are covered with the vines of rhus toxicodendron and this, with tannic acid, formed a green film over the entire surface of the tank; this

The fine road outfit of Dr. S. E. Bamford, Hastings, Nebraska

caused an eruption over the intact skin, producing profuse suppuration in the denuded areas, which resisted all local treatment until calcium sulphide to saturation was resorted to. A marked improvement was then noticed, continuing until the patient's recovery, six weeks later. I feel certain that this remedy was responsible for hastening the recovery.

GEORGE E. DASH.

New Albany, Ind.

—

[Another testimony to the remarkable value of calcium sulphide in suppurative processes!—ED.]

CURING RATTLESNAKE BITES

You say, to "fire our notes" at you. Isolated and a long distance from "any place"—as we are out here—often brings us in contact with many things not thought of elsewhere, and many times we accidentally discover some simple but valuable hints; and here I have one:

The "Greasers," or Mexicans and Indians, in Colorado, New Mexico and Arizona have long been in the habit of "shooting" gunpowder into snake bites with universal good results. If a horse is bitten—usually on the nose—they scarify it with a sharp knife, ("to make it bleed," they say), then take the ball out of a cartridge, put a coat or a blanket over the horses' eyes and fire the charge of powder into the bitten place, and all is well. The next day the horse's nose is swelled a little. That is all you can see that ails him. They treat themselves in the same way.

"Now the moral," as the parson would say. Rattlesnakes are very numerous here, and we find that if the bite is kept constantly wet for a few hours with a saturated solution of saltpeter (potassium nitrate) it is cured. Therefore it must have been the saltpeter in the gunpowder that cured. Try it while you are scouring the country about for all kinds, or any kind of whisky. Saltpeter is as "sure a pop" as aconitine or atropine when indicated.

The world "do move", and the alkaloids are the masterwheel of the machine. On with the fight, the "big shot" with the "little pills."

B. A. ARBOGAST.

Juniper, Colo.

A CURE FOR CHIGGERS

One of the boys in the field, J. C. Brown, of St. Louis, writes us that if the Missouri doctor who wants a cure for chiggers, will try carbenzol soap, he will be satisfied with the result. Put on a thick lather. He will

find nothing better. A doctor brother-in-law of Mr. Brown (a Missourian by the way), has tried this method of treatment and *knows*.

DEATH OF DR. WATTS

We are sorry to announce the death of Dr. B. P. Watts of East Galesburg, Ill. Dr. Watts was one of our oldest friends—an earnest advocate of alkaloidal therapy and a frequent contributor to THE CLINIC's pages. Many of our readers, I am sure, will recall his name.

Thus one by one the old guard pass away, but younger men are springing into the ranks to take their place. Let us revere these older ones, as the work goes forward.

WALKING TYPHOID

One of the most instructive lectures to which I ever listened was a farewell talk, at the end of a term. The students were told that we had heard of "typical" cases, but when we went to the bedside, we should not find diseases wrapped and labeled, like the shelfgoods in a drugstore, but that every individual case would have certain complicating side issues. There were so many attendant possibilities from other minor organs or idiosyncrasies, that almost every patient would present an individuality.

So with the present case. This patient is a strong man; he is thirty-four, married ten years, but has no children; is free from specific taint. He has been employed on the city waterworks for several years, making connections and the like, and was considered the best pick-and-shovel man in town. For nearly a year this man had been suffering from progressive emaciation and decreased appetite, and finally, last September, he collapsed. There were hemorrhages and free discharge of pus from the bowels, with persistent diarrhea.

Dr. F. E. Seal was called, pronounced the case as one of "consumption of the bowels." The entire history and symptoms of the disease fitted the diagnosis so perfectly that several medical men were taken by the doctor to "see a typical case." When I was called in, I jumped one of my hobbies and wanted some of the pus and other discharges for bacteriological examination, though not questioning the diagnosis.

I found no evidences of tubercle bacilli; but those of typhoid in plenty, together with the communis coli and pus-cells. I could hardly believe the evidence, and so sent material to the brilliant Dr. Helene Knabe, then in charge of the State bacteriological laboratory. She got the same results. For all that, what made the typhoid theory seem the more untenable was the fact that the temperature had never shown more than 101°F.

By this time the patient had become frightfully reduced, his weight having scaled down from 196 to 108 pounds. When I made the bacterial diagnosis he had been abed about two months and his death was considered as not more than a month away at most. Treatment was the palliation customary in advanced tuberculosis.

Dr. Seal at once began the intestinal antiseptic treatment as advocated by Drs. Waugh and Abbott, and changed the diet from a milk basis to one of grape juice.

Concerning this matter of diet, I believe that our time-honored idea of milk feeding in typhoid fever is wrong. Germs do not want any better medium in which to

> Get the habit
> Like the rabbit,
> Piling up to multiply,

than is afforded by milk, while grape juice, being acid, feeds the patient, and discourages the "bugs." So does good buttermilk, natural or artificial.

There was a gradual, slow improvement, though the loss from hemorrhage and pus continued. As a last resort, ergot was resorted to, 15-drop doses at intervals of three hours. There was immediate gain; and now are demonstrated the remarkable constitutional powers of this man.

After administering the drug for one week it was stopped as a routine practice, whereupon the discharge immediately became worse. With considerable trepidation the ergot was resumed and continued for

three months regularly, and with no ill effect resulting. Last week the man was discharged, cured.

The walking typhoid, I find, with the aid of the microscope, to be much more common than we think; but the resistance of this man to the unusual action of ergot makes me go back to that day when the old professor said, "We do not find diseases wrapped and labeled," and constitutional powers are not the same. Nor will routine do.

Every individual patient is different from every other one, and instead of exclaiming, "How strange!" we should only find in each anomaly a further spur to closer study of each; for even when we sometimes find them "wrapped and labeled," there may have been a mistake in the wrapper.

Now, don't think, please, that I am a devotee of the microscope. This instrument is one element in arriving at a diagnosis, and in cases such as the one above described it is the most valuable. A man might show tubercle bacilli under a bacteriological examination, yet if he has a compound comminuted fracture, it is good practice to attend to the thing immediately in sight.

Brains, trained brains, harboring minds that are open and discriminative, intellects that will ignore the precedents, when indicated, that is what the medical profession needs, while the fellows of the medical trade may sit around and say that the man who would continue ergot for three months is a criminal because the books say that the result would be gangrene.

In this case the result is a valuable life saved.

G. Henri Bogart.

Brookville, Ind.

ASEPTIC BARBER SHOPS

A short time ago, while I was spending a few days in one of the larger eastern cities, my attention was attracted, one morning, to an artistic sign which read, "Aseptic Barber Shop." I had need of the services in such an institution and lost no time to enter. An "aseptic barber shop" appeals to the physician in particular. The customary wait in the establishment was in store for me, so I made myself comfortable in an inviting chair until my turn would be called. To the appreciative mind it is very pleasing to find yourself surrounded by all the protection and comforts science can provide. In the business world we realize that it is not always possible to find an ideal sanitary environment, but wherever it is possible, it is invariably a necessity.

The sign "Aseptic Barber Shop" signifies progression in the business world along scientific lines and means protection to those who patronize the institution. These thoughts crystallized into reality as I watched the attendants, attired in white linen suits, gracefully performing their duties. To me the whole had an appearance of a surgical clinic, and it was with much satisfaction I acknowledged to myself that here in a crowded business thoroughfare, where men mingle closer than in any other public place, was put into rigid practice that most fundamental principle, "hygiene," which medical men today advocate so untiringly.

I was proud of my profession, and I fell into a quiet reverie of times, now long past, when the surgeon and the barber performed similar duties. A loud and reproachful suggestion from one of the clients to his attendant turned my thoughts back into the avenue of attention and I heard him say: "Now be careful of those pimples. They are sore today and the last time you shaved me my face burned for hours." A few reassuring words and a shaving brush full with lather vigorously applied to the face silenced him. When the shaving operation was over, the client looked into a mirror and commented with satisfaction that the tops of the objectional pimples had been removed and the contents expelled.

A rapid mental calculation brought me to the conclusion that the shaving brush was similar to the surgical sponge of old, it served as a receptacle for virulent germs from an infected surface. I pictured to myself the disastrous results that would follow the use of a sponge on a septic wound of one patient and then on an uninfected wound of another patient without first sterilizing it,

and I was relieved by the thought that so gross a neglect had no surgeon ever been guilty of even before asepsis was known.

I watched the attendant put a little more water in the shaving cup, stir the lather with the same infected brush and drain off the surplus moisture, as he called "Next." I hastily reached for my hat and made my departure without an apology or explanation. Looking back I saw the inviting sign, "Aseptic Barber Shop," and it made me shudder.

It would be very interesting to learn from some of the readers of CLINICAL MEDICINE their opinion of the sanitary condition of the public barber shop. Is there any danger from this source in spreading contagious skin diseases?

G. H. PERSSON.

Mt. Clemens, Mich.

TO THE MEDICAL PROFESSION OF THE WEST AND SOUTH

Up to the present time there has not been a concerted effort made to collect and preserve historical data in regard to the origin, evolution and personnel of our profession in this part of our country. The result of this delinquency has been a total loss of much material that should have been preserved, especially pertaining to medical schools and societies, and biographical matter in connection with the practitioners and teachers of medicine of by-gone-days. A good deal of material of this character is still obtainable if a systematic effort is made to locate and preserve it. It is in the possession of individuals, families and private libraries and will eventually be lost. *The Western Association for the Preservation of Medical Records* was organized in May 1909 for the purpose of collecting the historical and biographical records of the profession of the West and South. We wish to preserve anything and everything pertaining to Western medicine and medical men and are anxious to enlist the active help and support of every member of the profession who is in sympathy with our aims. We want everyone to become associated and identified with the work of our Association. There are no fees or obligations of any kind. We have made arrangements with the Lloyd Library, Cincinnati, O., for the proper housing of the material collected. The latter will be systematically arranged, catalogued and properly preserved so that it can be made available for research-work. We are particularly anxious to obtain matter as follows:

1. Medical journals published in the West prior to 1880.
2. Medical books and pamphlets written or published in the West.
3. Manuscripts and autographs of early Western physicians.
4. Old diplomas and other documents of a medical character.
5. Proceedings of medical societies.
6. Reports of hospitals and other medical institutions.
7. Catalogs and announcements of Western medical colleges of all "schools."
8. Biographies and portraits of Western physicians.
9. Information and material of any kind pertaining to medicine and medical men and affairs in the West.
10. Curios of a medicohistorical character.

All contributions should be sent in care of the Librarian. In view of the fact that we are performing a labor of love and have no funds, our friends and associates will readily understand why all contributions sent by express or freight should be prepaid so that no expense may accrue to the Association. The necessary expenses of the Association are at present being met by voluntary contributions of its organizers.

May we not count upon *your* active help and support? We should like to hear from every member of the profession who is interested in the proposed work.

C. A. L. REED, M. D., *Chairman.*
OTTO JUETTNER, M. D., *Secretary.*
A. G. DRURY, M. D., *Librarian.*
710 W. Eighth St.,
Cincinnati, O.

[This is a movement in the right direction, one which should be taken up in all portions of our country. Every year it is getting harder to collect data concerning our pioneer period—one whose intense interest will be fully realized in the days to come. We hope other communities will follow the example being set by our Cincinnati brethren.—ED.]

CLINICAL · MEDICINE
POST-GRADUATE SCHOOL of THERAPEUTICS

George F. Butler, M. D., Director
Thomas J. Mays, M. D.
Otto Juettner, M. D.
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PART III.—LESSON TWO

TYPHOID FEVER

In this lesson it is our plan to present a general therapeutic resumé of this disease, outlining at first the special indications and later filling in the details.

This month we discuss the general principles of treatment in an ordinary case; next month we shall consider the complications, sequels and unusual conditions that may arise.

The intoxication from typhoid fever does not take place in the same manner as in the eruptive fevers. On the contrary, the poison appears to be gradual and progressive, and to result from an increasing absorption of toxic principles, rather than the rapid infection of the entire organism with toxins. The effects of this intoxication are especially manifested by exaggerated bodily heat and rapid and profound diminution of strength. If, therefore, we seek to eliminate the morbific agents with the material which serves as soil in which they may develop, to neutralize those which we cannot eliminate, to lower the hyperthermia, and to prevent or overcome the adynamia, the disease will be reduced to its simplest expression. Its duration will, of necessity, be abbreviated, and by suppressing the morbid elements which give to it its gravity, we transform it into a benign disease with a mortality which is much less frightful.

The Prevention of Typhoid Fever.—We can do much in the way of prophylaxis by seeing to it that the water, milk, all articles of food, and everything taken into the alimentary canal is pure and absolutely free from typhoid germs. A typhoid patient himself is a source of much danger, and it is necessary to disinfect everything that has been in contact with the mucous membranes of typhoid patients. The typhoid bacilli can be found in the excretions from a typhoid patient, in the stools, urine, expectoration, etc., and in order that others may not suffer from this disease it is necessary that all secretions and excretions from a typhoid patient should be disinfected.

The stools can be disinfected by adding to them twice their volume of a 5-percent solution of carbolic acid or a 1-percent solution of chloride of lime. The urine can be disinfected by adding to it from three-tenths to four-tenths of its volume of a 5-percent solution of carbolic acid, or one-fortieth of its volume of a 1 : 1000 solution of corrosive sublimate. The disinfectant must

remain in contact with the excretions for an hour or two in order that the bacteria may be surely destroyed. The sputum may be disinfected in the same way. The water which is used for bathing a typhoid patient may become infected, and it is necessary to disinfect this also. This is best done by adding a solution 250 Grams of chloride of lime to 200 liters of water, allowing the mixture to stand for one-half hour.

Water-closets, privies, etc., where excretions have been deposited should be disinfected with chloride of lime or carbolic acid. All soiled linen, bed-clothing, etc., should be boiled for a long time and treated with 3- to 5-percent solution of carbolic acid, then washed after having been so treated.

Flies are a frequent source of infection; they carry the germs from a patient or from the feces of a patient to the food, so that they should be kept out of the room and all food covered up. Absolute cleanliness is of the utmost importance when typhoid fever is about.

During an epidemic of typhoid fever people should be kept in as good a condition of general health as possible. They should live well-regulated lives, not eat too much, and should not worry nor fret. They should also, as a matter of course, be very careful that no infectious material enters the alimentary canal. Water should be boiled, the food should be pure, and absolute personal cleanliness must be practised.

The socalled specific, or serum, treatment has not been tried long enough to justify our recommending it. It seems, however, to have proven valuable as a prophylactic and is being extensively employed in India and other countries.

Active Medical Treatment, in order to be effective, must be begun in the first days of the infection. When the intervention is late the opportunity for being useful is minimized. The disease may be checked and rendered much milder in its course by early interference; and then the doubt may arise whether the symptoms would have really developed into typhoid fever. The course of the disease during the first few days is sufficiently characteristic to put the physician upon his guard and tell him how to act at the proper moment in as resolute and energetic a manner as if the diagnosis of the disease were entirely established.

The Principal Indications are as follows:

1. Thorough cleaning out of the intestinal canal, thereby reducing the number of infectious germs present therein to a minimum, thus limiting the intensity of the infection. The "clean-out" further favors recovery by keeping the bowel free from all kinds of decomposing material, the absorption of which produces toxic symptoms which may be added to and intensify the effects of the specific poisons of the disease.

2. To check the multiplication of disease-germs, especially those specific to the disease, within the intestinal canal. This indication is met by the use of intestinal antiseptics.

3. To combat the systemic poisoning, due to the presence of typhoid bacilli in the blood, as well as the toxic by-products of these and other germs. Also to remove the poisonous waste resulting from the rapid breaking down of tissue during the febrile process.

4. To combat excessive temperature and maintain vascular equilibrium.

5. To guard the integrity of the heart and maintain the vital forces at the highest point possible.

6. To maintain the patient's nutrition, by proper feeding and attention to the digestion.

7. To be prepared for complications.

In the very beginning of the disease, or at least as soon as you are called and have decided that you have typhoid to contend with, calomel, or calomel and podophyllin should be given.

1. Cleaning Out the Bowel.—Calomel is especially efficacious in these cases. Not only is it an effective cathartic, but it has the added advantage of being quite an efficient intestinal antiseptic, both directly and by facilitating a free flow of bile. The addition of the podophyllin, because

it stimulates that great depurating and preservative gland, the liver, is usually an excellent plan. My preference is for 1-6 grain each of these two remedies, to be given every hour, or in some cases every half hour, until a full grain of each has been taken. I frequently add a small dose of the bile salts, to insure hepatic activity.

The calomel, alone or combined, should be followed with a saline laxative or other quickly acting purge, to insure complete emptying of the gut. Give a dose large enough or repeat it with sufficient frequency to bring away *all* the fecal accumulation. In some cases castor oil seems to act better than the saline.

The importance of thoroughness of the bowel toilet at the very inception of the disease cannot be too strongly emphasized, and the physician should see to it that throughout its course the same condition of intestinal cleanliness is maintained. Let him be on the lookout for accumulations of masses in the large intestine. These may require the use of enemas, high and repeated. Again, let me urge, be thorough!

2. Intestinal Antisepsis.—After the intestinal canal has been cleaned out well, the indication is then for the use of intestinal antiseptics. The selection of these is a very important matter, for those agents should never be chosen which distress the vital forces or which irritate the gastrointestinal canal, the vitality of which has been so profoundly affected.

Unquestionably the sulphocarbolates are the best antiseptic agents to give in this disease. I do not maintain that the use of intestinal antiseptics will have any influence upon the typhoid toxins already circulating in the blood, but by giving these intestinal antiseptics we may prevent to a large extent the absorption of more toxins, specific or saprophytic. The local antiseptic effects of certain drugs unquestionably modify the course of the disease, and as the treatment of typhoid fever is symptomatic, we must confine our treatment to symptoms largely. Dr. Waugh will go into the use of intestinal antiseptics more extensively, in the article which follows.

3. The Systemic Poisoning.—Formerly typhoid fever was looked upon as a purely local disease of the intestinal canal, and the necrotic changes in the agminated and other glands of the small bowel were regarded as the typical and practically sole evidence of its presence. Now we know that in every established case the bacilli enter the blood, so that we have a general infection to deal with. If we can combat the local process at an early stage, the number of microorganisms entering the circulation will be so small that the natural defensive forces of the body can take care of them, and so it is highly probable that many cases of the disease are aborted before the infection is far enough advanced to yield a Widal reaction.

In other cases, however, we have the general blood infection to combat. We may minimize its degree by preventing the access of germs from the bowel to the blood by suitable intestinal antiseptic treatment, and this alone will greatly modify the intensity of the disease. But is there nothing we can do (1) to destroy the typhoid germs now present in the circulating fluid, (2) to neutralize their toxins, or (3) to cause their rapid elimination?

We would answer, Yes. As a direct destroyer of the germs there is one remedy which deserves a careful trial in these cases. I refer to calcium sulphide, which seems to have a peculiarly efficient germicidal action in conditions which are strikingly similar. I would refer the reader to the article recently published in *The Medical Record* by Dr. C. D. Ussher and reprinted in this issue of CLINICAL MEDICINE. In every blood infection this substance should be given a careful trial. There is another remedy strongly advocated by the eclectics for all the septic fevers, echinacea, which has seemed to me of decided benefit. Both the echinacea and calx sulphurata should be administered freely; they are practically nontoxic.

Another remedy useful for the combatting of germs is nuclein. This acts by the stimulus of phagocytosis, or possibly through some opsonic action, thus making the germs

more easy of attack by the surrounding leukocytes. Nuclein should be tried in every case of typhoid fever showing a low leukocyte count.

To neutralize the typhoid toxins is the aim of most of the serums against typhoid fever. Following the Ehrlich theories concerning immunity, efforts have been made to create typhoid antitoxins, thus far with indifferent success, though Chantemesse claims good results in a large number of cases with such a serum.

The elimination of the toxins of this disease calls for attention to the bowel, as already described, and the care of the skin and kidneys. The latter, as too many physicians fail to realize, may serve as a means for the discharge of the germs themselves from the body, the urine thus becoming a common avenue for infection. It should be systematically examined, and if found to contain germs, then formin or urotropin should be administered.

One of the most valuable means of unloading the body-poisons is found in hydrotherapy.

One other point I wish to call your attention to is this: The urine should be frequently examined, and if there is found to be a high degree of urinary acidity (very much above 40°) some alkaline combination should be given from time to time to overcome the acidemia, and to favor the elimination of toxins.

4. Reduction of Hyperthermia.—The fever itself often must be treated. It is well known that prolonged hyperthermia is an element of danger, and that the reduction of the fever has a very beneficial influence upon the patient.

Hydrotherapy is one of the most valuable means of reducing temperature in typhoid fever, and this feature, as well as the other aspects of hydriatic treatment, will be discussed more particularly by Prof. Juettner.

Defervescence should be obtained gradually, and for that reason doses of medicines not larger than are absolutely required should be given, lest the adynamia be thereby increased; on the other hand, the dosage should not be a whit less than is required, otherwise the medication will be ineffective.

The adaptation of the doses to the resisting power of the disease, that is to say, "dosimetry" (i. e. accurate measurement), could not be improved upon in these cases. The plan should be the giving of fractional and oft-repeated doses, simple and pure remedies, the introduction into the stomach of those things only which are necessary, and in such doses as will not interfere with the absorptive capacity; and this plan can not be violated without injury to the patient. In many cases it will be proper to dissolve the defervescent granules (containing aconitine, veratrine and strychnine) in water, or in water mingled with wine or milk.

It will not ordinarily be necessary to employ the defervescent combination longer than the first week. The character of the pulse must determine. If it is full and firm this remedy is indicated; if there is much cardiac depression the dosimetric trinity (aconitine, digitalin and strychnine) may be substituted for the former combination. By the proper administration of these remedies the fever will be lowered and the general condition improved. This statement of course presupposes that other necessary remedial measures are being instituted and carried out. My experience justifies the statement that the early use of the defervescent or dosimetric combinations exerts a wonderful influence in modifying the course of the disease. I do not, however, continue these granules throughout the whole course of the disease; their best effect is produced when given early in the attack.

The Sick-room of a typhoid-fever patient should not be too warm, and must be frequently and thoroughly aired. The bed must be well cared for. Very sick patients should lie on a water-bed or air-cushion. They should, if possible, have their positions changed frequently, not lie continually upon the back. The back and other portions of the body that are subjected to pressure (heels, sacrum, shoulders) should be bathed frequently with spirit of camphor, brandy or alcohol. Bed-sores

should be prevented if possible—and usually this can be done. Even the smallest bedsore should at once be treated by cleansing thoroughly with a weak solution of salicylic or carbolic acid, a 1 : 10,000 mercury-bichloride solution, or a saturated solution of boric acid, and then dressing with an ointment containing 1 part of balsam of Peru in 30 parts of glycerite of starch. If the sore is extensive, dusting with thymol iodide is very efficient in the treatment and it may also be used in oily solution. Should the skin become undermined, the use of the knife or drainage-tube under thorough asepsis must be resorted to.

The mouth, tongue and nose should be kept clean with boric-acid solution, or better, an effective solution of menthol compound.

Water or drinks slightly acidulated with phosphoric and lactic acid, or lemon or orange juice, should be given frequently by the nurse without waiting for the patient to ask for it, unless his mind is usually clear.

The Diet.—Alimentation is a most important factor in the treatment of this disease, for upon the diet will depend the presence or absence of meteorism, curdled stools, and possible perforation.

Formerly a semistarvation diet was advocated, but of late years we have begun to feed our patients more and more, endeavoring thereby to conserve the tissues and thus hasten convalescence.

The diet should be liquid or semisolid during the fever-period and for full ten days thereafter. Milk, in this condition, is the ideal food and should be taken in amounts of from two to three quarts daily. In many cases the unmodified milk forms curd-lumps, a condition which must sedulously be avoided in view of the inflamed intestine. Buttermilk here is valuable because more readily assimilable and less productive of curds. Rubinstein has shown (Strauch, *Medical Record*, March 30, 1907) that pathogenic organisms, including the typhoid bacillus, gradually perish in buttermilk, due probably to antagonism of the lactic-acid bacilli. Tryptic digestion is promoted by the acidity of the buttermilk and tympanites is lessened. Kumiss, or even whey (sweet or sour) may also be substituted for milk.

Coleman (*Jour. Amer. Med. Asso.*, October 9, 1909) has advised the addition of milk-sugar and cream to the milk because of the high caloric value of these foods. Strained soups of arrowroot, barley or rice, with a little butter and salt added, are useful articles of diet.

Meat juices and jellies are highly grateful to the patient and may be served in the form of ices. Ziemssen recommends the following: 500 Cc. of fresh meat juice, 250 Grams of sugar, 20 Grams of lemon juice, 20 Grams of brandy; dissolve, then add yolk of 3 eggs and a little vanilla. Freeze in an ice-cream freezer. As the high nitrogen-content of meat is liable to give rise to digestive disturbance it is best to allow meat preparations only sparingly.

Too much stress cannot be laid upon the drinking of plenty of pure water during the attack as also during convalescence. It should be the rule for the patient to take water every half hour while awake. A good plan is to have a bottle fitted with a glass tube kept filled at the bedside and encourage the patient to suck a little often. The water not only tends to reduce the temperature but keeps the toxins in the system well diluted and flushes them out.

When the temperature falls to normal for a few days the addition of an egg-nogg to the diet is welcomed by the patient, at first allowing once daily, in the afternoon, then, in a week's time, if the temperature remains normal, add another in the forenoon. Solid food should not be permitted until the patient's temperature has been normal for ten successive days, and then the patient's desire to eat ravenously should be guarded against.

George F. Butler.

Chicago, Ill.

INTESTINAL ANTISEPTICS IN TYPHOID FEVER

When first we began to use intestinal antiseptics in the treatment of typhoid fever and noted the remarkable benefits following

the use of these agents, the explanation seemed clear—they killed the bacilli in the alimentary canal. But it soon became evident that the problem was not so simple. Investigation demonstrated that it was impossible to administer enough of any chemical disinfectant to render the alimentary canal absolutely germ-free.

From this discovery men jumped to the utterly unwarrantable conclusion that the germicides were consequently entirely useless for this purpose, forgetting that the same thing was true with regard to such remedies on the surface of the body, though on the germ-theory had been built the entire structure of modern surgery and to the application of this theory were credited the marvelous triumphs of that art. Then it was discovered that the typhoid bacilli were to be found in the blood of the patient even during the incubatory stage—and again our friends took an ascension into the clouds of unwarranted assumption by asserting that this showed the uselessness of any attempt at intestinal disinfection.

To this we who had used the method and knew its value replied that the explanation of a fact might be erroneous without vitiating the fact. We simply waited for theory to catch up with our observations and give an adequate explanation; and meanwhile we went on with the treatment that had given us far better results than any previously employed.

Interference with Bacterial Processes Enough.—Our knowledge of disease-germs and their biology has progressed until we know that in their action in and on the body of man their numbers count as well as their simple presence; and that a material diminution of the invading army aids the patient by enabling his vital resisting powers to cope better with the smaller number of enemies. Agents that destroy part of these, or interfere with their multiplication or the formation of their toxic products or neutralize the latter, or interfere with their absorption into the circulation, or increase the resisting powers of the body as nuclein does by increasing the number and activity of the leukocytes are of material assistance to the patient and, we believe, in the majority of instances may turn the scale to recovery.

Without assuming any specific action against the microorganisms, I firmly believe that we aid the patient materially by removing from his alimentary canal the fecal accumulations that furnish a flood of toxins to his blood, depressing the vital functions, and increasing the fitness of the blood for a nidus for the multiplication and operations of these invading parasites. By this one therapeutic measure we remove the source of malignity in acute infections and the most important single causal agency in the production of chronic disease—for to what may this be assigned so reasonably as to the furnishing of impure feces-contaminated blood for the nutrition of the affected tissues and cells?

The Sulphocarbolates Give Best Results.—As intestinal antiseptics I prefer the sulphocarbolates, because they are as effective as any; they may be administered in liberal dosage without any deleterious effects, immediate or remote; they can be had in a state of chemical purity and are cheap; and there is absolutely no peril to children or ignorant persons who might partake of them by accident. These qualities do not pertain to any other remedy of this class known to me.

Intestine Must First be Cleaned.—The failures with the sulphocarbolates reported to me have been numerous. Every such that has been investigated has turned out to be ascribable to a failure to appreciate the fact that the bowel must be completely emptied before an effort is made to disinfect it. Who would think of disinfecting a cesspool before it has been emptied? Yet that is just what men seem to expect of the sulphocarbolates.

Then many fail to appreciate that the function of these salts is simply that of a disinfectant, and seek to ascribe to them the role of miracle-workers. They treat a typhoid-fever attack by the old, ineffective do-nothing method, and when ulceration has occurred and perforation impends, when the patient is lying in a moribund

state from toxemia, these doctors give a few grains of sulphocarbolates—and then petulantly ask, "Where are the wonders promised?"

When the bowels are completely emptied and this remedy is administered in suitable dosage until the gut is disinfected, and subsequently in sufficient quantity to keep it aseptic, there will be no ulceration, no intestinal hemorrhage, perforation, diarrhea, tympanites, anorexia, indigestion, insomnia, aching, delirium, subsultus, carphologia, intense depression, or any of the many other noxious symptoms, nervous or otherwise, that the long employment of these sulphocarbolates has enabled us to ascribe definitely and with certainty to fecal toxemia. If perchance the damage has been done and ulceration has occurred, then we may advantageously add oil of turpentine to induce healing.

The Calomel Purge.—Since the days of Wunderlich calomel has been recognized as of peculiar efficacy when given at the outset of a typhoid fever. Whatever its true action, its efficacy has been too well attested for question. Give a single 10-grain dose, as Wunderlich did, or one grain in divided doses, as is the present custom, and follow this with a sweep-out of a saline laxative. If necessary, give also a colonic flush with warm salt water containing enough zinc sulphocarbolate to make it disinfectant, say, 1-2 to 1 grain to the ounce.

Other Medicinal Treatment.—Then give zinc sulphocarbolate, 1 to 3 grains every hour, by the stomach, in powder, capsule or solution, until the stools no longer have any abnormal odor. If the bowel has been first completely cleared out this will never require more than 40 grains a day; and after this about one-half the former quantity will suffice daily to keep the gut in proper asepsis. I have frequently given 2 drams a day, with impunity. If a *chemically pure salt* is employed there is rarely any special gastric irritation; but if there is, give with each dose a few grains of bismuth subnitrate and lactopeptine or ingluvin. Bismuth specifically allays gastric irritability; so does pepsin, which is not here given with any thought of its possible virtues as a digestant.

The colonic flushing, it should be noted, must be repeated, no matter what diet is employed, since fecal matter is not dependent on the food but secreted in part from the intestinal walls.

Under this method the attack, however threatening it may have appeared at the outset, is soon deprived of its virulence and remanded to the category of mild, simple, benignant forms; the course may even be materially shortened, and the physician will be having unexpected difficulty about his diagnoses, since a number of cases that he, judging by past experience, looked upon as beginning typhoids, will puzzle him by clearing up in a few days.

Is this a fancy sketch? Try it and see for yourself.

W. F. Waugh.

Chicago, Ill.

HYDROTHERAPY IN TYPHOID FEVER

The earliest records of the hydrotherapeutic treatment of typhoid fever date back fully seventy years. *Vincens Priessnitz* was probably the first man who persistently preached and practised the use of cold water in the management of all febrile conditions, especially typhoid fever. The general adoption of Priessnitz' method by the profession was due to the meritorious work and the painstaking investigations of *Ernst Brand*, a military surgeon of Stettin, Germany, who introduced the use of cold water in the treatment of typhoid fever in the military hospital under his management and startled the profession by the magnificent results which followed the hydrotherapeutic treatment of the disease.

Former Malignancy of the Disease.—Typhoid fever in the fifties and sixties was a most murderous affliction and was a veritable scourge in camps, barracks and prisons, in fact wherever people were congregated in large numbers under inferior hygienic conditions. In times of war the ravages of typhoid fever were more feared than the damage done by the bullets of the

enemy. Nowadays we can hardly appreciate the malignant character of typhoid fever. We do not expect to lose more than one out of twenty-five or twenty cases.

Sixty years ago the disease was feared almost as much as Asiatic cholera. During the Crimean war, the war of 1859 in Italy and the Danish-Prussian and Austrian-Prussian wars of 1864 and 1866 the management of typhoid fever was the most serious problem which confronted the military authorities. Three out of four or even two out of three victims succumbed.

In those prehydriatic days the term *typhoid* expressed the character of the disease, suggesting a *smoky* or *cloudy* brain, severe brain and nervous symptoms; hence the German name of the disease, *nervenfieber* (nervous fever). In those days they knew nothing about autointoxication and about complex functions of the skin with reference to metabolism, heat production and waste excretion.

The Priessnitz-Brand Treatment a Blessing.—When the water-treatment of typhoid fever was introduced and generally adopted, the character of the disease seemed to change. The symptoms of autointoxication largely disappeared because the skin was utilized as a means of getting rid of the offensive material, and thus there was less absorption of poisonous matter. The symptoms pointed more in the direction of the alimentary canal, as indicated by the term *enteric fever* or by the German *unterleibstyphus*. Thus the entire natural history of the typhoid bacillus and the latter's activity within the living body has been changed by intelligent cooperation with the physiological machinery of the body, that is, by accentuating the physiological self-sustaining and self-protecting functions of the organism or any part of the latter.

In the case of typhoid fever the *physiology of the skin is of the greatest consequence.* In order to understand the modern treatment of typhoid fever, the reader must be familiar with the principles of hydrotherapy and especially with the physiology of the skin. All these points have been discussed in previous lessons.

The Technic of Hydrotherapeutic Applications has been the subject of much difference of opinion among the various operators. The use of *the tub* is recommended by many excellent hydrotherapeutists and this mode is practised in many modern hospitals. Personally I have long ago discarded the tubbing method, except in hospital-practice, owing to the technical difficulties attending a properly given tubbing. For the sake of completeness of our discussion let me give the technical details of the tubbing method according to Solis Cohen and Kellogg:

Details of Tubbing Method.—The bathtub, says Solis Cohen, is brought to the side of the patient's bed, and filled with water at the temperature decided upon. Brand (and those who follow him strictly) begins with water at 68° F., and he may in subsequent tubbings reduce the temperature, but not to below 59° F. The patient, wearing swimming trunks or covered merely with a sheet, is gently lifted by two attendants and so laid in the tub that he is thoroughly immersed in the water, his entire body being covered up to the chin, and the head being best supported out of the water upon a rubber air pillow suspended from the top of the bathtub. Cold water (of 60° F. or less) is poured upon the head and face during the immersion, and the limbs and body, with the exception of the abdomen, are briskly rubbed during the entire period of the bath. In hospitals it is convenient to apply a cold douche to the head and shoulders by means of a current from an elevated reservoir—the irrigating apparatus of the surgeons, in fact. The cold affusions and the brisk friction are important features of the treatment, and to their neglect may be attributed failures and unpleasant results.

The duration of the bath is from ten to twenty minutes, according to the reactive power of the patient. Unless cyanosis or decided shivering, chattering of the teeth, general failure to react, or untoward effect upon the heart is noticed as a result of the bath, Brand insists that it be repeated every third hour so long as the rectal temperature continues to exceed 102.2° F., and that this

is to be done day and night, regardless of sleeping or other consideration.

As I stated before, the tubbing method involves much preparation, labor, assistance, attention to technical details, and hence is unwieldy, hard to apply and hardly practicable in private houses.

Cold Moist-pack or Douche Preferable.—Instead of tubbing the patient, I much prefer and recommend the use of the *cold moist-pack* or the *affusion* (*douche*) in private practice. Both methods require but one attendant and can be given without disturbing the patient much. They require no equipment and are ideally useful in private homes. The *technic of the cold moist-pack* has been described in a previous lesson.

Technic of the Douche.—The douche can, if need be, be applied by means of a sprinkling can, the water having the proper temperature. *Father Kneipp* slipped a waterproof sheet under the patient, covering the entire bed. The patient is nude or, if need be, covered with a thin sheet. The douche is then administered by means of a sprinkling can. The performance is terminated with a brisk dry-rub all over the body of the patient. The duration and frequency of the application are determined by the relative intensity of the skin reaction, by the (subjective) feeling of the patient after the application, by the condition of the pulse, and by the thermometer.

It is useless to attempt to lay down general rules for the administration of these methods. Individualization is of cardinal importance. Every case is a law unto itself. Experience in these, as in so many other, things is the best teacher. One fact, however, is worth remembering. The success of all these methods depends on the reaction in the skin. If this reaction is good, there is but little danger of doing harm by frequent repetition.

Import of the Cutaneous Reaction.—The importance of skin reaction following cold-water applications in typhoid fever cannot possibly be too deeply impressed nor too often reiterated. In applying cold water to the body-surface, the reduction of the temperature is only a secondary consideration, physiologically speaking. *Cold applications are made to bring about a cutaneous anemia.* The sudden and forcible contraction of the blood-vessels of the skin is followed by a reaction consisting in the socalled *secondary hyperemia.* The vessels dilate, and in this way warmth and increased function of the skin are produced by a primary cold application.

Increased skin function is coincident with more active excretion of morbid material and more intense radiation of heat-units. Thus the *temperature is reduced by a lessening* of the amount of *fever-producing toxins* and by *elimination of heat.* Hence it is obviously absurd to leave a patient in a cold bath until the temperature drops, a plan based upon an amateurish conception of the action of cold water in typhoid fever. Cyanosis, collapse, and even death have followed this misinterpretation of hydrotherapeutic principles.

The Warm Bath as an Antipyretic.—The best illustration of the principle involved is furnished by the antipyretic effect of the warm and even the hot bath. In cases where the system is much depressed and cutaneous reaction is uncertain, the warm bath is a safer hydriatic application. The cutaneous vessels are directly affected and the activity of the skin is at once stimulated. Excretion (by gas, vapor or sweat) begins and the temperature drops.

The *continued application of cold* to the skin can not be too emphatically *condemned.* Suddenly induced anemia of the skin must always and promptly be followed by increase in the cutaneous circulation and stimulation of the skin function. Any hydrotherapeutic measure that fails in this is wrong in principle and incorrect in practice. This holds good, not only in typhoid fever, but in all conditions characterized by high temperature.

Let us remember that sweat is concentrated heat.

Temperature Must Be Carefully Regulated.—A continued fever, such as typhoid fever, should be watched with the aid of the thermometer. If the temperature is not

more than 102 F., one or more cold sponge-baths daily are sufficient. If the temperature exceeds 102° F., the application of a general cold moist-pack for forty-five minutes to an hour is indicated. One of these Priessnitz-packs every day is sufficient, if the temperature is not higher than 102° F. If the temperature rises within three hours after the pack, another application should be made or the patient subjected to immersion in a tub (Brand's method).

In cases characterized by continued high fever it is excellent practice to give three packs daily and an immersion (tubbing) in the interval, unless the patient shows signs of great weakness, when the cold bath (either by direct application of a towel or sponge or by rubbing the patient through a cold moist sheet in which he is enveloped) should be substituted. Tubbing can be done, especially in children, by wrapping the patient in a dry sheet, grasping the latter below the feet and above the head of the patient, and gradually lowering patient, sheet and all, into the water.

Some Special Considerations.—Undue *excitement* and *exhaustion* are *contraindications*. If cutaneous reaction is sluggish or imperfect, warm and even hot water should be used. Sometimes *alternation of heat and cold* is indicated. In this way the antipyretic effect can be combined with powerful stimulation. At all times it is of vital importance to be able to individualize. Brisk rubbing of the skin during and after a cold bath is an effective way of promoting reaction and preventing collapse. In cases characterized by headache and severe brain symptoms the cold moist-pack gives considerable symptomatic relief, delirium, stupor, subsultus, etc., being markedly lessened.

Symptoms and Complications in the individual case require attention. Persistent headache may call for cold applications to the head and hot applications to the feet. In cases which are treated with the general cold moist-pack this is hardly ever necessary. Abdominal symptoms (tympanites) may require a local cold moist-pack to the abdomen. Diarrhea is usually controlled by starch-water or rice-water injections. Constipation is best treated by means of rectal irrigation. Bedsores should be prevented by cold ablutions and the use of air pillows.

Environment and Diet.—The sick-room should have a wealth of air and light. The temperature in the room should be 65°F. or a trifle higher. Mental rest is imperative. The bed should be kept scrupulously clean. Feather beds are an unhygienic nuisance. The ejecta should not be allowed to remain in the room. Food should be small in quantity but liberal in quality. Stimulants like coffee or alcohol are indicated in cases of great weakness. The patient should not take solid food until the temperature has been normal for at least two weeks.

Peritonitis is a serious complication, but not necessarily fatal. It should be treated by "derivating" packs applied to the abdomen and to the lower extremities. Perforation is fatal unless the opening is closed by agglutination or by surgical means. Owing to the almost invariably fatal character of perforation, abdominal section under these circumstances offers the only prospect, and is, therefore, justifiable.

Hydriatic Treatment and Nurse Paramount.—After all that has been said on the subject of treatment we are prepared to admit that the principal feature in the management of a typhoid-fever case is the hydrotherapeutic treatment of the febrile condition. All else pales into insignificance. Proper hygienic and dietetic regulations are taken for granted. The nurse in charge of the case is the one overtowering figure in whose hand the weal and woe of the patient are placed. Without intelligent cooperation and a strong will on the part of the nurse, the most modern treatment planned by the best physician will avail nothing.

It is for this reason that the modern hospital with its perfect equipment, its nurses and attendants is, after all, the ideal place to treat a severe case of typhoid fever. The tubbing-method can be effectively applied without running the risk of doing greater damage by treatment than could accrue to the patient if nothing were done. In the hospital the sprinkling can—Father Kneipp's

primitive and powerful apparatus—is supplanted by many elegant modern devices, among which Baruch's "douche-table" deservedly occupies a foremost place. It is the best practical device for scientific and exact control of temperature and all the other elements of the hydriatic prescription.

Otto Juettner.

Cincinnati, O.

STIMULANTS DURING FEVER

Stimulants, in my estimation, resemble venesection, hysterectomy, etc., in that they should be used in febrile states only when clear indications exist. The heart is of course the chief organ of artificial stimulation.

The great heart symptom indicating the need of stimulation is irregularity combined with weakness (i. e. pulse-wave rising to a slight height only). Too often *softness* of the radial pulse is impending cardiac failure, with immediate resort to large doses of elixir digitalin compound (with its wellnigh useless nitroglycerin), hypodermics of strychnine (1-20 of a grain), and so forth.

I regard the strychnine contained in the dosimetric compound as not stimulant, but that it acts as a cardiotonic or incitant. Similarly with the nux vomica and capsicum compound combination, where, in ordinary dosage, a genuinely *stimulant* effect is absent.

The pulse is the great guide as to the need of stimulation and furnishes most, or at least many other, contraindications.

Strychnine in moderate dosage, say gr. 1-40 to gr. 1-60, may be combined with almost any other heart stimulant in heart wavering. Alone, in dosage of not less than 1-30 of a grain, hypodermically, it is particularly useful in acute collapse during fever.

Caffeine produces its effects quite rapidly, hence is suitable for collapse. During continued fevers, if the heart weakness is comparatively slight, caffeine is useful. Renal inactivity is a special indication. Sparteine resembles caffeine particularly in the latter respect.

Digitalin is the mainstay in serious or continued cardiac complications during fever, and may be almost always advantageously combined with strychnine in moderate dosage. The great contraindications of digitalin are stomach disturbances and high arterial tension.

Ammonium carbonate is useful to tide a patient over a crisis, likewise camphorated oil, hypodermically. Alcohol I find no place for except perhaps stout and good port, which may temporarily serve as food. Oxygen inhalations I have had little experience with. Cactin is a cardiac tonic, not a stimulant.

Atropine hypodermically is indispensable when cardiac irregularity and weakness are accompanied by vasoconstriction of the cutaneous vessels.

Strophanthin may replace digitalin in cases where the latter disagrees, fails, or produces too pronounced vasoconstriction.

These few drugs will, I believe, when used properly, tide over any heart that can be forced to do its work. The great point is, don't use a spur until it's needed. Furthermore, keep the most powerful weapon in reserve till demanded, namely, strychnine in huge doses.

R. W. Halladay.

Hurry, Alberta, Can.

THE HEART IN FEVER

That the heart would be affected by any condition of health so divergent from the normal as it is in any of the fevers, is to be expected from our knowledge of the distribution of the sympathetic nerves and the law of reflexes based thereon. This is, perhaps, a little more apparent in those fevers which are based, more or less, upon a local inflammation, as in pneumonia and inflammatory rheumatism, but is also discoverable in systemic fever.

In order to have a more comprehensive grasp of this subject let us ask: "What are the causes that affect the pulse-rate?" They are age, sex, pain, excitement, drugs, organic poisons (katabolic processes and microorganisms), variations in blood pressure, the

action of the accelerator and the inhibitory nerves, and *heat.* The greatest of these causes is heat. Most of these causes do not concern us in this essay. Let's study those that do.

Heat.—"Speaking generally the rate of heat increases regularly with the temperature of the blood or other circulating liquid up to a certain optimum temperature. On the heart of the cold-blooded animal this relationship is easily demonstrated by supplying the heart with an artificial circulation of Ringer's solution, which can be heated or cooled at pleasure. The rate and force of the beat increase to a maximum, which is reached at about 30° C. Beyond the optimum temperature the beats decrease in force and also in rate, becoming irregular or fibrillar before the heart finally comes to rest. Newell Martin has shown the same relationship in a very conclusive way upon the isolated heart of the dog. Within physiological limits the rate of beat rises and falls substantially parallel to the variations in temperature. . . . The accelerated heart rate in fevers is therefore due probably to the direct influence of the high temperature upon the heart itself."—Howell. The pulse rate rises 10 beats for every one degree of elevation in temperature, as a rule.

Drugs.—"Among the drugs which increase bodily temperature are cocaine, atropine, strychnine, brucine, caffeine, veratrine, etc., and a large number of organic substances and microorganisms. Those that decrease the rate are morphine and other hypnotics, anesthetics, quinine, various antipyretics, large doses of alcohol, etc." "American Text-Book of Physiology." In this lies a suggestion which is so patent that I need not mention it. [The statement of "The American Text-Book" is certainly misleading, to say the least, with regard to veratrine. In medicinal doses it slows the pulse and the blood pressure falls, and with it there is a fall of temperature. Its action, as given by most writers, is similar to that of aconitine. See Cushny. Only under peculiar circumstances can it cause elevation of temperature.—Ed.]

Organic poisons developed within the body as a result of body katabolism or as a product of bacterial life raise the pulse-rate, usually with some fever. "Clean out and keep clean." The pyrexia will then vacate the premises and the pulse-rate come down.

Variations in Blood Pressure.—The law is, low pressure gives a rapid pulse, as after a large hemorrhage, shock, great depression, etc. A hemorrhage or a perforation occurring in typhoid fever will be announced by a greatly increased pulse-rate. Raise the pressure by narrowing the capillaries and arterioles.

The pulse-rate is regulated by the accelerator and inhibitory nerves. The normal rate obtains when there is a balance of these two opposing forces. Increased stimulation or decreased inhibition result in a faster heart beat. Take your cue from this and prescribe accordingly.

Almost always some of these minor factors will be operating with the major one (heat) to make the tachycardia found in a fever. But the heart is not the same in all fevers. In typhoid fever the pulse is abnormally slow, that is, it does not keep up with the temperature. With a temperature of 104° F., we shall have probably a pulse of 95 or 100 instead of 130. Endocarditis, pericarditis and myocarditis are rare complications in this disease.

In smallpox the pulse and temperature keep accord pretty well in the primary fever. In the secondary fever the pulse may get ahead, because the toxemia is added to the pyrexia. Pathological changes in the heart are rare.

In scarlet fever the pulse and temperature curves follow each other pretty closely and pericarditis is not an unfrequent complication.

In diphtheria there are extreme variations in temperature (100° to 107° F.) and in pulse (50—180 or more) without much accord. Cardiac lesions (anatomic lesions) are not so frequent as would be expected from so intense a poison. They should always be looked for, however. Paralysis of the heart with sudden death is a frequent end in diphtheria.

In lobar pneumonia the two curves follow each other closely, but the respiration curve does not follow the other two. Endocarditis is a frequent complication.

In rheumatic fever endocarditis and pericarditis are so frequent that a man could not be excused for not discovering them. These examples will be enough to verify my first statement in this paragraph.

IRA N. BRAINERD.

Alma, Mich.

ALIMENTARY FEVER

It has only been within the last few years that we looked in the alimentary canal and found it a breeding place for many germs or bacteria, that produce pathological conditions, made manifest in the form of fever.

The human mechanism is so perfectly constructed that when it is in normal working order every function works in perfect harmony and the mechanism operates as one harmonious whole. As long as there is perfect harmony between the fuel consumed and the waste thrown off, the machine will run smoothly; but just as soon as there is an accumulation of waste, there is going to be a clog and the engine will fail to come up to the standard.

To put it in another way, we might say that, when the opsonic index is normal, there are a sufficient number of phagocytes in the system to consume any invasion of bacteria that may occur, or if the organs and bodily functions are in perfect working order, then we are in such a physical condition that we can resist or are immune to any disease, no matter how virulent. So long as the index remains normal, the systemic functions are normal, but just as soon as it drops below normal, the resisting elements—the phagocytes—become weak in numbers as well as in individual power, consequently they are overpowered by the pathogenic bacteria and we have disease and consequent fever.

This balance is especially true of one of the greatest functions of the body, that of digestion and assimilation. So long as the alimentary tract, in which are located all the organs of digestion, is in a healthy condition, these different organs are going to perform their functions normally and a sufficient number of strong healthy phagocytes will be present to consume all foreign bacterial invaders that may come their way, but let something occur to interfere with the digestive function and it will not be long until it is out of equilibrium. Autointoxication occurs and we have a fever.

I do not believe that we have a fever that does not originate either directly or indirectly from intestinal intoxication. This may seem a broad assertion, but take it up and digest it a while and maybe you will think as I do. If it were not true, why do most physicians make it a point to treat the digestive canal from the first, no matter what may be the disease?

It has been stated that food alone, under certain conditions, will induce fever. Alimentary fever is most common and striking in infants with gastrointestinal disturbances. It is claimed that albumen has nothing to do with the production of alimentary fever, but that it is due to sugar and salts which act by their physical properties. Fat may have an indirect influence, but the physical properties of the salts and salt-like elements in the food have some injurious effect on the cells, checking their normal functions, thus leading to abnormal decomposition in the body, which in turn disturbs the regulation of heat. The child with normal digestion will tolerate salt and sugar without disturbance, but a child with gastrointestinal disturbance responds with fever.

According to this idea, when salt or sugar is taken into the diseased digestive tract, the same reaction occurs as when it is injected subcutaneously. It is claimed that the intestines have some special action on the salt and sugar, rendering them innocuous in normal conditions, but when the intestine is deranged it loses its protective power. The liver will act for the intestines for a while, but it becomes exhausted and then alimentary intoxication and fever are observed. This property the liver has of helping out the intestines perhaps accounts, in part, for the beneficial effect of calomel in intestinal

intoxication or in any other form of fever.

During the past summer I have had under treatment a dozen or more cases of diarrhea in infants in which treatment was confined exclusively to calomel in minute doses, often repeated, not to exceed one grain to one patient and cerium oxalate in small doses, with total abstinence from food of any kind. I could not have asked for any more happy results. The calomel stimulated the liver-action and at the same time acted as an intestinal antiseptic. My instructions were to give the calomel until there was a solid stool as a rule.

The giving of food to an infant sick with gastrointestinal trouble in my estimation is like trying to put out a fire with dry shavings. This may not be classical, but it is my honest opinion. In infants the intestinal function and the metabolism in general are still very weak and consequently alimentary intoxication occurs from very slight causes.

In adults we have a fully developed being, with his intestinal function strong and capable of standing more abuse than the child; still, he is not any the less liable to alimentary intoxication in the same manner as an infant, and it has been demonstrated that sugar and salt are best excluded from the diet of adults during intestinal derangement. Alimentary intoxication due to salt has been traced down to the compounds of halogens with sodium. None of the other sodium compounds display this fever-producing property, only sodium chloride, bromide and iodide.

Whether the salt and sugar theory stands the test of time or not, there is no question as to the fact that if we do not eliminate the waste from the system, we are going to have fever. The fuel that is not eliminated, when once rejected, is going to be burned over again or it will remain in the intestines as an irritant or as fertile soil for germ breeding, and the system be loaded with toxic matter. Autotoxemia of the intestinal tract is at the bottom of nearly every fever man is heir to. It therefore follows that if the engine is overfed it will be overworked, and that if the ash or debris is not properly removed, the fire-box will soon clog up and fail to perform its normal work. Excessive heat will be generated, which we recognize as fever. Reverse the picture, follow a clean-out, clean-up policy, and the trouble will disappear.

T. H. Line.

Marquette, Neb.

THE CARE OF THE SKIN DURING FEVER

During the various diseases which are accompanied by fever the skin needs careful attention. The entire body should be sponged once daily, at least, in all fevers and more often if the temperature goes above 102.5° F.

At first the body should be bathed with an epsom-salt solution, one ounce to the quart of water. This cleanses the skin and opens the pores, thus greatly aiding elimination through the skin. If temperature is high and we are bathing to lower fever we can use plain water or alcohol and water, equal parts.

The back and dependent portions of the body-surface may become sore, as the skin is tender, and bed-sores may develop unless special care is taken. Here strict cleanliness and bathing with alcohol, and dusting the parts with powdered boric-acid or bismuth subnitrate, are very beneficial. Changing the posture of the patient frequently also aids greatly.

In infectious diseases which are accompanied by an eruption the same amount of bathing may be necessary and some antiseptic should be used in the solution. A 3- or 5-percent carbolic-acid or lysol solution may be used once or twice daily and the whole body anointed with a 5-percent carbolic-acid or bichloride of mercury ointment. This applies more particularly to scarlet-fever and smallpox cases.

In many cases, especially young children, and where the patients are greatly emaciated, and in which absorption from the digestive tract is poor, we can aid greatly by applying pure olive oil or codliver oil to the skin over the abdomen, and in the axilla. This

should be applied warm and rubbed in carefully. If the skin is very dry the whole body may be anointed. This softens the skin and prevents soreness.

In all fevers absolute cleanliness of the skin is essential and very beneficial. In long-continued fevers like typhoid, careful bathing and care of the skin helps elimination and absorption, and aids much in shortening the course of the disease.

The skin must be watched in painful conditions where external applications are used. Applications either very hot or cold may cause sloughing of the skin. I saw one case of gangrene of the skin that was caused by long-continued use of the ice-bag in an appendicitis case. A woolen pad or cloth should be kept between the skin and the icebag or hot-water bottle, and the condition of the skin observed frequently.

H. G. Palmer.

Detroit, Mich.

FEVERISH BABIES

As a general proposition I do not believe in giving infants and small children any more medicine, internally, than is absolutely necessary, and so, when fever is present in my small patients, I generally have resort to hydrotherapy.

Of course, if there is disturbance of the digestive tract, or any other specific alteration of function or evidence of toxemia or any morbid process, such conditions must be met on proper principles with suitable remedial agents—especially a quickly acting purge. There remain, however, many cases of simple febricula, slight colds and minor ailments where an elevation of temperature is practically the only symptom. In such cases, and also as an adjuvant to other treatment in the more serious febrile maladies of infancy, I find the following procedure of great service.

I take a long, heavy towel and fold it in the middle, lengthwise. I then dip one-half of the towel in cold water and squeeze it out just until it does not drip. The child being stripped, I now wind this towel about the body with the wet half next to the skin, the dry half serving to protect the clothes from the moisture and also to increase the value of the compress. The clothing or night-clothing is now replaces and the child laid down, when it will usually fall asleep and awake much improved and with lowered temperature.

This compress may be left on all night, if applied when the child is put to bed, which is a very good way to arrange the matter, although it may be put on at any time when the circumstances require it.

Geo. B. Lake.

Wolcottville, Ind.

BELIEVES IN BUTTERMILK

I am delighted to see your invitation to readers of Clinical Medicine to contribute something about typhoid fever for the November number, and especially that you ask for one on "buttermilk feeding in typhoid" by a man who has had experience with its use in that disease.

No, I am not going to "butt in"—had my fling in the last December number, and have been verifying it since. Excepting a Texas brother's endorsement I have not seen a word for or against it. Had hopes someone would say, "Mistaken diagnosis." A discussion might have brought something good—but, then, next month will.

You do not want "hash," so I will not even suggest this for anything you ask for the November issue, although I should like to urge the exclusive use of buttermilk in typhoid fever.

Fourteen years of anxiety while feeding sweet milk and almost six years of satisfaction with buttermilk makes one wish he could have every indifferent reader give it an honest trial. Of course these satisfactory results are possible only by "cleaning out and keeping clean" the patient. So the sulphocarbolates deserve much of the credit; but of what use are they when a fermentable mess is poured in after them? Some other food is as good or better? What?

"How I treat typhoid delirium?"

I don't have it in my practice, after giving a cleaning-out and *feeding only buttermilk.*

But suppose there already is the delirium to start with? Then I have not cleaned out the patient. So I do it now thoroughly, and then push the buttermilk. The fever quickly falls and the delirium disappears.

Typhoid fever treated with the sulphocarbolates, after a germ-searching clean-out, and with the patient kept clean, does not develop delirium if buttermilk is fed.

Never saw a real bad case of typhoid? Well, "mebbe so." God help the "real" ones then, man can't.

"Intestinal hemorrhage in typhoid?" Haven't seen any since I've been feeding buttermilk—six years now. Saw many during the fourteen preceding years with the sweet-milk diet. Depended mainly then on ergot, turpentine and cold applications. Now should give atropine to effect while waiting for the slower ergot, hydrastinine and cold to act. Dr. Waugh says: "If the bowels are well emptied, kept clear and disinfected throughout, there is very little danger of hemorrhage." To which I would add, "even less so with buttermilk feeding."

"How I care for the heart?" When the heart is not overladen it will keep up its end. Don't get loaded up with toxins and you won't have to sleep with one ear open listening for the heart's call for digitalis or strychnine.

I am not so foolish as to think that I am the only one "hollering" "buttermilk," but can't forget that in CLINICAL MEDICINE (editor excepted) the Lone-Star state gave the lone comment, and I do want to know what others are doing.

W. T. PRATT.

Potomac, Md.

MORE IDEAS REGARDING TYPHOID FEVER

I see you are going to have typhoid fever as a special topic in your November issue. I have been practising medicine for thirty years and have my first case of typhoid fever, uncomplicated, to lose yet.

Before you folks began preaching your clean-out, clean-up and keep-clean and bowel-antisepsis theories, I was practising it. I used then and use now calomel in good full dosage followed by a saline laxative and enema—and I have precious little use for your 1-6-grain dose of calomel yet, but I generally give a grain every hour for six doses, and then follow with epsom salt in two hours.

Formerly I used oil of turpentine as a bowel antiseptic; later I used salol; now I use the sulphocarbolates in solution "to effect," and the majority of my typhoid-cases are jugulated in from ten to seventeen days.

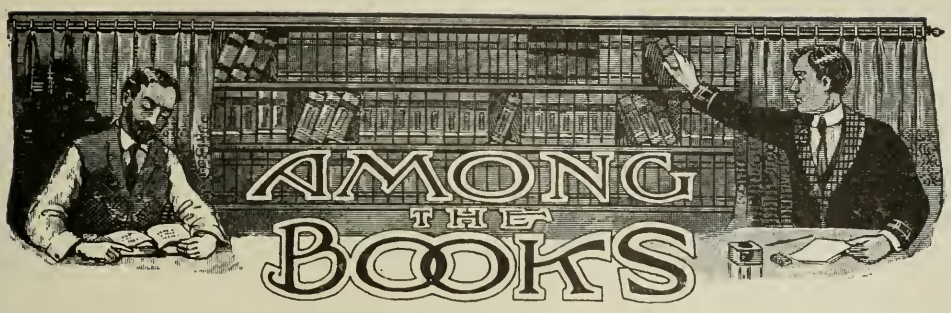
In one case of continued high fever which held on and on for days I used an enema of kerosene oil, eight ounces, followed by a quart of soapsuds, and the temperature was normal in twenty-four hours.

Boonford, N. C. J. B. EWING.

[Whether we agree or not regarding the dosage of calomel it is evident that we stand with Dr. Ewing (or he with us) on the *essentials* for successful treatment in typhoid fever. The "clean-out" must be effective—that's fundamental—and the kerosene-oil enema is a valuable help.—ED.]

EXAMINATION QUESTIONS

1. What is the nature of the typhoid intoxication?
2. Outline the part played in the causation of typhoid fever by (a) water, (b) food and (c) insects. Tell how sources of infection have been traced in your practice.
3. Describe the method or methods of cleaning out the bowel during this disease that you have found most effective.
4. What do you seek to accomplish by the use of intestinal antiseptics? How does their use modify the course of the disease?
5. Describe the different methods employed to combat any typhoid germs that may be present in the blood.
6. How do you endeavor to reduce the fever, by (a) medicinal and (b) hydrotherapeutic expedients?
7. Give in detail a logical dietetic regime for typhoid fever.
8. How is the tub-bath used in the treatment of typhoid, and with what success?
9. Give your reasons for using or rejecting the sulphocarbolates in this disease.
10. Describe the hydrotherapeutic methods most useful in private practice.
11. What is the real purpose of the cold applications made to the skin?
12. When should the warm bath be employed?



ROHE AND ROBIN'S "HYGIENE"

A Complete Treatise on the Principles and Practice of Preventive Medicine from an American Standpoint. By George H. Rohe, M.D., of the College of Physicians and Surgeons, Baltimore, and Albert Robin, M. D., of the Temple University, Philadelphia. Fourth revised and enlarged edition, with many illustrations and valuable tables. Philadelphia: F. A. Davis Company. 1908. Price $3.00.

We like this book for the reason that it is prophylactic in its aim, and this is what the science and art of hygiene stands for. We like it for its general conservative spirit. We like it for its plain language and therefore its accessibility to anyone that has had a common education. We think it a most excellent book from which one may learn the present hygienic demands of the person and of the community and assemblage of persons. Altogether, therefore, a very recommendable book.

MASSEY'S "GYNECOLOGY AND ELECTROTHERAPEUTICS"

Conservative Gynecology and Electro-Therapeutics. A Practical Treatise on the Diseases of Women and their Treatment by Electricity. By G. Betton Massey, M. D. of the American Oncologic (Tumor) Hospital, Philadelphia. Sixth revised edition. Largely illustrated. Philadelphia: F. A. Davis Company. 1909. Price $4.00.

What strikes the person who takes up Dr. Massey's book as a study and guide in practice is, next to its detailed thoroughness, its honesty of statement of what can be accomplished and what was accomplished by others and by himself with electricity in female diseases, and also what can not be and what was not attained after thorough trial.

The author is quite cautious in his discussion of why the knife is preferred in many cases to electricity, which latter does not mutilate. But it may be that this very fact is the reason, and that reason trenches closely on the prevalent economic family-life doctrines, which regard the mutilation of certain sexual organs as a lawful acquisition. The book of many pages of closely printed matter comprises a vast amount of information up to the latest of what tireless research both in electric, medical and surgical gynecology have discovered or adopted in practice. It is a pleasure in more than one respect to state that the author's ideas have gained a victory in the ten years that elapsed since the first edition appeared.

GREENE'S "EXPERIMENTAL PHARMACOLOGY"

Experimental Pharmacology. A Laboratory Guide for the Study of the Physiological Action of Drugs. By Charles Wilson Greene, Ph. D. Third edition. P. Blakiston's Son & Company, 1909. Price $1.00.

The standardization of drugs has become of such importance that it is necessary to introduce a portion of its technic into the medical schools. This little volume shows an immense amount of laboratory work performed by the author and demonstrates his familiarity with all the many details.

But on the whole the book tells relatively too much of how to test and on what animal or on what part of it, and not enough of the results of each test.

Another criticism would be the failure of the author to use more of the entire live animals available rather than depending on stimulating of tissue outside of the living body. An anesthetic can be given so that the animal's heart can be exposed and remain in nearly normal conditions and then tracings made, both normal and when under the drug. The kind of anesthetic can be greatly improved as there are those allowing of such work and the animal remain under its full influence for several hours, as e. g. the anesthesia produced by hyoscine, morphine and cactin.

The book is well written, presents a neat appearance and adds material value to our meagre literature upon experimental pharmacology.

THORNTON'S "POCKET FORMULARY"

A Pocket Formulary. By E. Quin Thornton, M. D., Professor of Materia Medica in the Jefferson Medical College, Philadelphia. Ninth edition, revised. Len & Febinger, Philadelphia and New York. Price, $1.50.

A book so frequently consulted by those who use galenic medicaments and which has attained its ninth edition can legitimately commend itself without further praise from anyone.

"THE INFLUENCE OF SODIUM BENZOATE ON THE NUTRITION AND HEALTH OF MAN"

This is one of the most important publications of the Department of Agriculture bearing on the question of food preserving. It contains the following three treatises by reliable authoritative men: (1) An experimental study of the influence of sodium benzoate on the nutrition and health of man, by Russell H. Crittenden. (2) Investigations on the effect of sodium benzoate on the health and general metabolism of man, by John H. Long. (3) The action of sodium benzoate on the human body, by Dr. Christian A. Herter.

The physician who will not put forth some effort to obtain this volume through his representative in Congress or otherwise fails to do his duty toward his library.

ESSENWEIN'S "SHORT-STORY WRITING"

Writing the Short Story. A Practical Hand Book on the Rise, Structure, Writing, and Sale of the Modern Short Story. By J. Berg Essenwein, A. M., Lit. D. Published by Hinds, Noble & Eldredge, New York. 1909. Price, $1.25.

No apology is required for the appearance of this brief notice in these columns, though it has no relation either to medicine, surgery, obstetrics, materia medica or therapeutics. We physicians are human, and everyone of us can say with Horace of old, "*Homo sum, nil humani alienum a me puto.*"

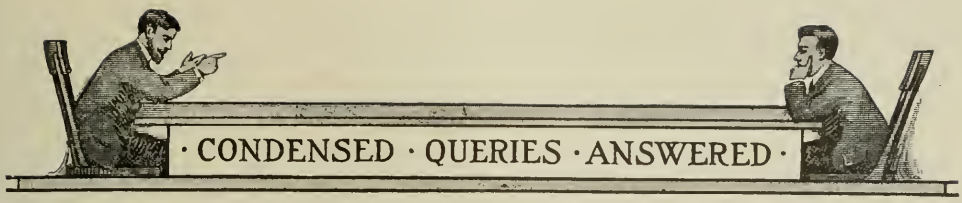
LIPPINCOTT'S "INTERNATIONAL CLINICS"

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles by leading members of the medical profession throughout the world. Vol. I. Nineteenth series. Philadelphia and London. J. B. Lippincott Company. 1909. Price $2.00.

Some very timely, new, and always interesting articles are contained in this volume, but the most useful and immediately available articles for the physician ever alert to benefit his patients are those under the headings of Progress of Medicine, Treatment, Medicine, and of Surgery. These are worth many times the price of the entire book.

"ANNUAL REPORT OF THE MICHIGAN STATE BOARD OF HEALTH"

We gladly acknowledge receipt of this Report. For every health statistician such reliable compilations always contain valuable information.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

Query 5506.—"A Twenty-eight-foot Tapeworm." E. E. L., Iowa, sends us a rough sketch of a tapeworm twenty-eight feet long that was expelled one and one-half hours after taking one ounce of his favorite tapeworm remedy (oleoresin male fern, drs. 2; chloroform, drs. 1 1-2; croton oil, gtt. 4; castor oil, q. s. ad ozs. 2). In describing the parasite, he says: "There are two "suckers," and about three-fourth inch from the end is a circular opening through the center of the worm. The segments are very short (as shown in sketch) and the worm tapers toward the tail until at the end it is a mere thread in thickness. I have never seen one just like it and it does not meet the description of any worm by any author I have, viz., Starr, Pfaundler & Schlossmann, Goodno, Rane, Butler, Halbert and Jousset. What kind of a worm is it?"

The "thread-like extremity" *is* the head-end of the worm, and a careful study of the parasite and your various works will enable you to decide whether the head itself was voided. We are inclined to consider it was, as your drawing shows that the last sections of the neck were expelled. Always examine these with a magnifying glass to identify the head, which resembles, roughly, an E string of a violin flattened by chewing and with two black spost on the flattened portion. This is a very crude description but is just what the head of tænia saginata (the beef-worm) looks like. This worm possesses four "suckers" upon the head. The head of tænia solium under a strong magnifier reveals a circle of hooklets absent in tænia saginata. Tænia cucumerina, being a very small worm, need not be considered here.

Tænia saginata is a larger worm than tænia solium and its head is slightly larger. The segments, moreover, are longer, thicker and darker. In tænia solium the segments forming the body are very broad and short, especially toward the neck-end; as they increase in width downward, they also increase in length. The body segments of tænia solium are white.

Bothriocephalus latus, the largest of the tapeworms encountered in the human, has been recognized by practicians several times during the past few years. The head of this worm is of an elongated club shape, provided with two long narrow slits, one on each side. There are no hooklets; the proglottides, or segments near the head, are short and very wide, but toward the lower end become nearly square. In the center of each segment which has attained maturity a reddish rosette-like mass may be noted. This is the uterine tube filled with eggs. We are wondering whether the circle you speak of was not this uterine tube, while the peculiar "forked extremity" was doubtless the curve which is so often seen in the end of a mature segment, especially after recent separation of proglottides. It is very unlikely that a worm twenty-eight feet long would be voided entire. Naturally in a worm of this age and size segments would have matured and separated, and this is the

only explanation we can give of the peculiar forked or curved extremity, though abnormal segments—some with an opening in the center—are not infrequently voided.

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Query 5507.—"Hematuria. Diabetes." A. C. B., Oklahoma, presents the following clinical data and a specimen of urine, and asks for suggestions:

"Case 1. Male, aged 26, single, height 6 feet, weight 150 pounds; ordinarily in good health up to April, 1909; no history or traces of specific disease or tuberculosis; one great-grandmother died of tuberculosis. Merro tuberculin-ointment test negative. No albumin in urine (heat and nitric acid) nor sugar (Fehling's test). Has been a pretty free user of coffee, tobacco and whisky at times, but has always lived an active farm life and is not harmed thereby.

"In April, after some weeks' active work and a day's tramp behind a planter (which necessitated quite a bit of lifting) hematuria set in, without any other symptoms whatever. Blood was sufficient to color urine highly, but the patient would not have known anything was the matter for several days, so far as his feelings were concerned. But after a week or so he began to feel weakened; later still be began to have slight pain in region of bladder with an uneasy feeling and tenderness and sensitiveness of urethra and prostate, which has continued more or less until I began treating him. Some years ago before he had had spells of frequent urination of considerable quantities of clear urine; these would last only a short time. Prostate not enlarged; urine alkaline in reaction, specific gravity 1028.

"Treatment: Urotropin and salol, 3 to 5 grains each after meals, three times a day. Specific chimaphila and hamamelis, with elixir of saw palmetto before meals; cascara to keep bowels open. Bladder flushing every third day with a 1 : 2000 silver-nitrate solution. The urethral tenderness and uneasy feeling subsided, but only small diminution of blood flow. Later I added hydrastin, 0.01 Gram every three hours. Then I left off the urotropin and salol as urine had become acid in reaction, and added calcium chloride, 10 grains after meals for five days, then 5 grains for five days further. So far but little effect upon the hematuria has been made. Urine shows much blood at times, and then again is almost entirely clear.

"Case 2. Male, aged 30, single; no history of specific disease nor tuberculosis. One brother died of diabetes and another is affected. Had attack of malaria last summer but recovered completely; had another attack this summer, and has been under the care of different physicians, with, however, very little if any improvement. No albumen in urine (heat and nitric-acid test), traces of sugar by Fehling's test.

"Treatment: Thorough cleaning out with calomel and saline laxatives; bowels have been very sluggish. Nux vomica, chionanthus, chelidonium and hydrastis after meals. Arsenauro to saturation; the sulphocarbolates before meals in hot water. Patient is feeling some better and has an appetite.

"Will the 'family' give me some help here, especially in the first case? What is the most successful treatment for diabetes?"

The report of our pathologist upon the urine in case 1 shows enormous hyperacidity, large quantities of pus, a few hyaline casts, blood, urates, uric acid, etc. Insufficient urea is another evidence of an acidemia with its inevitable autointoxication.

We suggest, Doctor, that you examine the rectum, urethra, abdomen and renal areas with the greatest care. There may be a tubercular focus. On the other hand you may have a calculus to deal with. The source of the pus must be definitely ascertained. The casts may disappear when the renal congestion is relieved.

Appropriate antilithic alkaline treatment (e. g., compound of sodium sulphocarbolate, grs. 2 1-2; sodium sulphate, grs. 5; sodium bicarbonate, grs. 20; colchicine, gr. 1-500; juglandin, gr. 1-6; xanthoxylin, gr. 1-6; dose, one teaspoonful with a glass of water an hour before each meal) will speedily reduce the acidity. You cannot do better than to give arbutin, 1 grain with a glass of thin barley water three times daily, adding to each draught a full dose of a good prepara-

tion of hydrangea. Administer before each meal, boldine, Gm. 0.002; xanthoxylin, Gm. 0.02; and at least four times daily, collinsonin, Gm. 0.02, eupurpurin Gm. 0.02, echinacea, Gm. 0.06.

Wash out the bowel with decinormal salt solution every other night, and if convenient, irrigate the bladder with boric-acid or a 1 : 2000 chinosol solution. Saline laxatives may be used daily to advantage.

To treat diabetes successfully you must treat the conditions present in the individual. In all cases, however, it is essential to improve tissue metamorphosis in every possible way and promote elimination. Strychnine, iron arsenate and nuclein are invariably indicated, with a saline laxative each morning. Quassin before meals if the appetite wavers; dilute hydrochloride acid with meals. After eating, arsenic bromide may be given and is often effective. Codeine may be needed to reduce sugar. Lecithin, calcium carbonate and sodium salicylate have their indications. Ergotin, the strontium salts, pilocarpine, bile salts and pancreatin are quite often called for. Diet carefully, and test the patient's ability to consume carbohydrates. Give test-diet. But as has been often stated, we must never attempt to treat a "named disease," but intelligently select the remedies demanded by the conditions existing at the time in the individual.

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QUERY 5508.—"Rachitis or Infantile Paralysis?" D. D. H., Colorado, describes the case of a baby eight months old that has his head drawn to the left shoulder (contracted sternomastoid muscle). The condition is now of some two-months' standing. Three months ago the child seemed to have an anterior curvature of the spine or an abnormal laxity of the spinal column. That has disappeared and its spine now seems normal. When this neck and head began drawing toward the left shoulder we noticed its left eye became crossed (internal strabismus). One doctor diagnosed "wryneck" and recommended that a harness be worn in daytime.

The family is of a nervous disposition and our correspondent diagnosed "rickets;" he prescribed codliver oil to be rubbed over abdomen and neck as well as to be given internally. He also gave phosphorus in minute doses. The doctor says the child looks perfectly healthy and is not anemic, and it takes the mother's breast, who seems to be strong. It has never been sick and is well developed. "Would welcome suggestions as to treatment, and in case a brace is needed, please tell me where I can buy one and the cost."

The child may suffer from rachitis, spinal disease, or there may be partial paralysis. Examine the long bones and see if the well-known "rachitic rosary" is in evidence. Is there atrophy of muscles upon one side, areas of anesthesia, hyperesthesia? Test the ocular reflexes carefully, note condition of fontanelles, shape of head, etc.

You might be markedly aided in your diagnosis by reading the chapter on rachitis in Dr. Candler's book, "Every-Day Diseases of Children." Kyphosis and lordosis are not infrequent in rachitic infants, while some degree of enlargement of the joints with bending of the long bones can almost invariably be observed. There is, moreover, enlargement of the spleen; constipation proves troublesome; the glands often are enlarged.

We hardly believe that this is a case of rachitis. You do not state condition of child at birth or for the first two or three months of life. It might be well to examine the mother's milk, which may be deficient in bone-forming properties. At any rate, it can do no harm to have the child placed upon a course of calcium lactophosphate and nuclein. If a brace is indicated, you cannot do better than address Philo Burt, Jamestown, New York.

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QUERY 5509.—"Atropine and Hyoscine with Morphine?" L. R. D., New York, writes: "Some time ago, in THE AMERICAN JOURNAL OF CLINICAL MEDICINE, someone asked, 'why not use atropine with the hyoscine-morphine combination to avoid respiratory or other untoward symptoms?' Your answer was decidedly negative, something like this, 'Suppose you try it once and see what

will happen,' the implication being that decidedly unpleasant symptoms might be expected from the combination. But no hint was given of what really would happen. I cannot quite figure out myself what the contraindication may be. Hyoscyamine and atropine might be too much alike, but I thought hyoscine essentially different, and atropine is the antidote for morphine and a sedative to abdominal pain. Kindly tell me what would result from such a combination."

The remarkable effects of the hyoscine-morphine-cactin combination, let us recall, are due to the exactly balanced physiological action of hyoscine and morphine, the cactin-content merely maintaining normal circulatory conditions. Were we to add another derivative of the solanaceæ, such as atropine, we should destroy the balance and instead of having anesthetic somnolence we might set up wakefulness or even active delirium. Indeed the exact balance of dosage which has been secured in this compound applies in human practice only, for in horses, if given in full dose, the hyoscine-effect preponderates in a marked degree.

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QUERY 5510.—"Too Small Doses do not Produce Desired Results." W. H. B., West Virginia, failed to get results from hyoscyamine. He says, in reply to our letter asking for details: "I was attending a child two and a half months old that had severe attacks of colic. I had been giving Waugh's anodyne for infants tablets. I started with one granule at a dose, dissolving it in a teaspoonful of warm water. That did not seem to relieve the child. I increased the dose to three tablets every fifteen minutes until the child became quiet. In other words, I kept increasing the dose until I got results.

"When the mother sent for me again to see her child I had used up all my anodyne tablets. So I filled a 3-ounce bottle with warm water and dissolved in it a granule of 1-250 grain of hyoscyamine (amorphous), and directed to give one teaspoonful every fifteen minutes until the child became quiet. I did not get any results, so I increased the dose by putting two granules (gr. 1-125) in 3 ounces of water and ordered a teaspoonful every fifteen minutes until relieved; but that failed. I increased the dose by putting in a third granule, and *that* failed.

"The dosage seemed large enough for a child nine months old and I was afraid to venture too far, as that was the first time I had ever used the drug. I have found the rest of the alkaloids do just what they are said to do, but I could not, in this instance, get any results out of the hyoscyamine. The trouble may have been my not giving 'to effect.' I have never had any bad results, but always good from the alkaloidal granules. I consider them ideal remedies, and if you can set me right on hyoscyamine, I shall appreciate it very much."

Frankly, we consider the small dose responsible for your failure to obtain results here. We do not, of course, know the origin of the colic, nor do you state what measures you instituted to remove the underlying cause. However, we should not hesitate to give 1-3 of a granule (of gr. 1-250) of hyoscyamine (amorphous), if indicated. Then, after securing elimination, a dose of apomorphine is often the best remedy.

Shaller's rule, "one granule to twenty-four teaspoonfuls of water," is very conservative; moreover—as we are continually pointing out—there can be no maximum or minimum dose. The average dosimetric granule represents the *smallest known-to-be-effective dose for an adult*; on the other hand, one such granule is taken to be the average *full dose for a child of one year*. An infant of two and a half months, suffering from severe congestive conditions, would probably be relieved promptly by a third or half a granule of hyoscyamine, smaller doses being given at 15-minute intervals until the face flushes.

You do not state, Doctor, how long after giving the anodyne you commenced the use of the hyoscyamine? It is barely possible, in your case, that you had to counteract the codeine effect, the action of this drug being somewhat persistent.

Let us suggest, further, that for infants you *decrease the bulk* of the solvent and at the same time give relatively somewhat

larger doses of the alkaloid. Thus, for instance, you dissolve, say, one granule of hyoscyamine in a teaspoonful of warm water, and of this give 10 or 20 minims at a dose. In this more concentrated form absorption is prompter, while the smaller bulk is more easily administered. There is no question as to the efficacy of reliable hyoscyamine granules. It is practically impossible for them to vary in their therapeutic value. Next time find the cause of the colic and remove it; then give the indicated anodyne "to effect."

—

QUERY 5511.—"Suspected Nephritis." W. C. C., Massachusetts, writes: "Can you advise me in the following case? Woman, age 28, mother of one child, supposed to suffer from Bright's disease. She has been treated by two other doctors; one gave up, telling her there was no help. She came to me last month with a sample of her urine, which showed: color, clear, amber; specific gravity, 1028; nucleoalbumen in excess of seroalbumen, of which latter only a small percent existed. I cleared out the alimentary tract, gave the sulphocarbolates of sodium and zinc (grs. 5), with half a glass of water three times a day half an hour before meals, for one week, to make the bowels aseptic, then put her on elixir iron, quinine and strychnine and elixir of peptenzyme, equal parts of each. She has been on that treatment for three weeks and has gained in that time three pounds. Her appetite is normal. She now passes three pints of water daily. No heart trouble, no bulging of the eyes. I have the urine examined every three weeks. What more can I do, in your opinion?"

We fear, Doctor, that you forget that while you seem to have a very clear idea of this patient's physical condition, you have not made it so to us. The report of the chemist upon the specimen of urine is incomplete, but certainly does not make evident the existence of nephritis. Send a 4-ounce specimen of urine taken from the twenty-four hours' output to the laboratory, giving us a complete and clear clinical picture, including heart-sounds, pulse-rate, condition of skin, of the tongue, mucosa, excretory activity, etc.; test the reflexes and obtain present weight. Find out if there is any disorder of pelvic organs, also sketch the family history.

Empirical treatment in a case of this kind is worse than useless, it is dangerous, and in order really to help the patient we must have a clear conception of the underlying pathology. Note carefully, Doctor, the existence of tender areas along the spine, especially in the renal region, and pay some attention to the rectum. Having at hand these clinical data and the report of the pathologist upon the urine we shall be in better condition to venture a diagnosis and to prescribe accordingly.

In the meantime we would suggest high enemata of decinormal salt solution and salt sponge-baths. Put the patient on a milk diet, two quarts of milk at least daily. Give aconitine, digitalin, and strychnine arsenate, in small doses, morning, noon and night, to equalize the circulation; further, if the pulse is at all hard, veratrine may be tried every hour or two to sedation, then often enough to maintain effect. Nuclein solution, 8 to 10 minims under the tongue morning and night. These are basal remedies and seem to be clearly indicated.

—

QUERY 5512.—"A Bottle (of Beer) and a Baby." R. H. W., Arkansas, encountered a difficult problem and presents it for solution.

A young mother's milk failed to some extent when her baby was two or three months old. The baby lost in flesh and assumed a purplish or livid hue. Two or three doctors prescribed for the child, but conditions did not improve. Finally the husband applied to an old German doctor, who prescribed lager-beer, saying that nothing else would take its place. The husband and mother (very reluctantly) acquiesced, as the only thing left, and it has proven successful thus far

Our correspondent continues:

"I told the father that I was sorry for any doctor who prescribed beer as 'the best and only thing.' The father says that if I

can prescribe anything that will take the place of the beer I shall have a case—not of *beer*, but the care of the baby. Now, do you believe that whisky or beer are absolutely necessary at any time. Do you? Anyhow, I have laid the case before you and will thank you very much for an opinion. The husband (and mother) are being criticized for using beer. Can the constituents of beer or the benefit derived from it be found in something else? If not, we must concede one point to the liquor traffic."

To the foregoing letter we replied substantially as follows:

"This is an extremely interesting communication. Unfortunately, Doctor, you omitted to state whether the child received the lager-beer or the mother. We could quite understand administering a pure lager-beer to a mother whose milk is insufficient or of poor quality. That beer is a galactagog goes without saying and physicians throughout the world have recommended malt beverages to delicate nursing women. On the other hand, from our knowledge of the chemistry of beer, we can hardly regard it as being a satisfactory *substitute* for mother's milk, yet the German peasantry feed their babies beer without hesitation. Indeed the writer has seen (not once but many times) the baby's bottle filled with beer which the little one contentedly imbibed; moreover, it flourished upon the beverage. In these cases, of course, the child has received both beer and milk.

"We should very much like to discuss this whole matter and would ask you to give us a more definite notion of conditions. Does the mother nurse the child at all? What is the mother's condition of health; any tubercular or other specific taint? If the child is receiving the beer, how long has it been used and how much is given daily?"

In a subsequent communication our correspondent cleared up matters by stating that it is the mother who drinks the beer and thrives thereon—but with her the child. Of course every doctor knows how valuable a tonic good hops are, while the nutritious properties of malt are equally well known.

We yield to no one in our ardent advocacy of temperance, yet are willing to admit that there may be situations in which beer or whisky is of value

The end here certainly justifies the means and the hypercritical individuals who condemn this young woman possibly are doing some infinitely more reprehensible things every passing day.

The "old German doctor" really is to be congratulated for recognizing the pathological condition present: he prescribed in its most available form the indicated remedy, and he produced the desired effect. And that is "*Positive Therapeutics*".

—

QUERY 5513.—"Pellagra." W. H. L., North Carolina, asks: "What are the symptoms and the cause or causes of pellagra as you consider them?"

Pellagra, as you know, has until quite recently rarely been reported in this country. It is distinctly a disease of dirt, poverty, ill feeding and bad hygiene, and in Italy and other parts of southern Europe is caused largely, so it seems, by the consumption of spoiled, moldy corn. Dermatologists have even traced some cases to the use of spirits made from damaged corn. We may look upon pellagra, therefore, as being akin to ergotism.

The symptoms are distinct; the prodromata being weakness, intestinal catarrh, giddiness, headache and burning sensations in back, limbs, hands and feet. The skin eruption usually makes its appearance in the spring, the back of the hands, wrists and forearms, sometimes the upper surface of the feet and the face becoming erythematous. The skin often is so swelled that it prevents movement of the parts. Bullæ may form on the affected areas and erosions rapidly follow. The disease, unfortunately, tends to have a fatal ending, although as winter comes on there is a gradual decline of the symptoms and during the colder months patients may appear in good health. With the recurrence of hot weather the whole train of conditions appears again with augmented violence. This condition may persist for years.

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THE BENGAL PATHOLOGICAL RESEARCH INSTITUTE,
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To the Etna Chemical Co., 313 West St., New York, N. Y.

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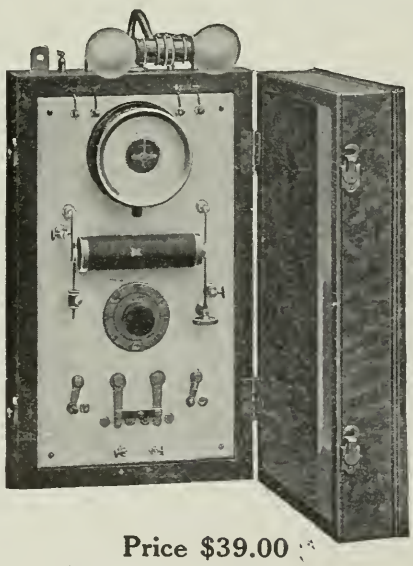

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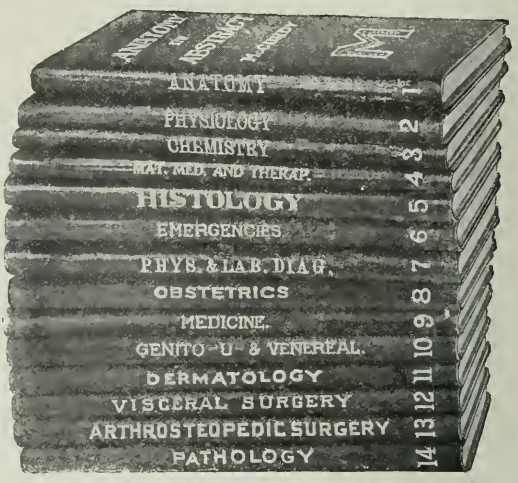

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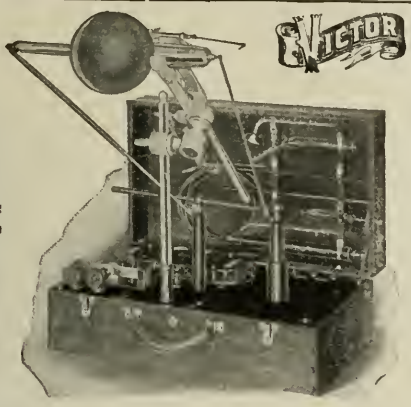

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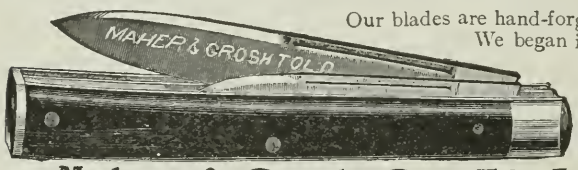

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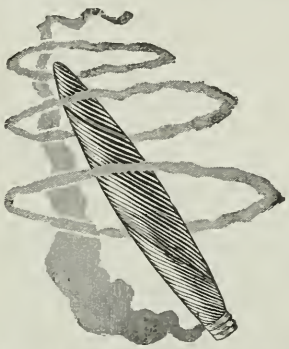

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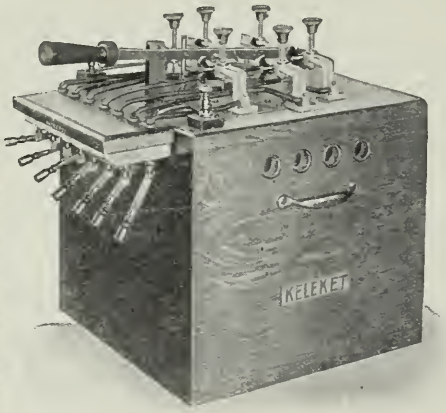

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Guaranteed by The Idoneen Chemical Company under the pure food and drugs act. June 30th, 1906, serial No. 2290.
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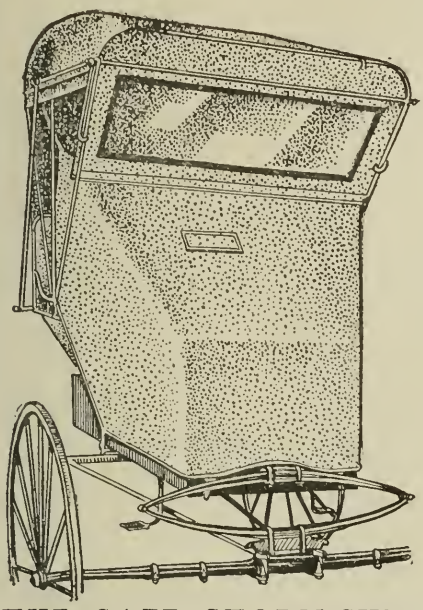

It avoids all danger of being cooped up in case of accident.

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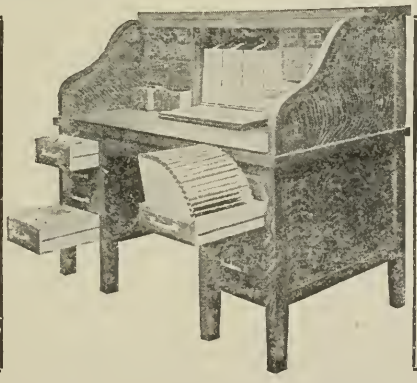

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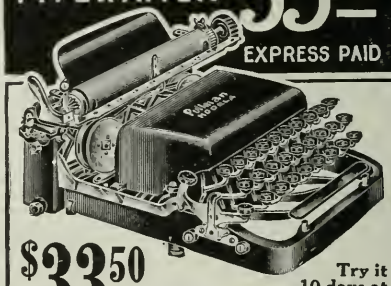

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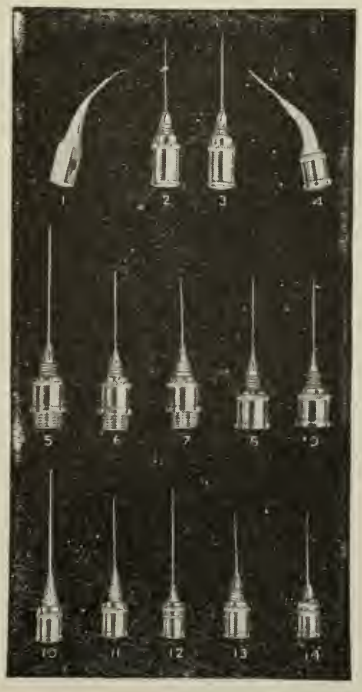

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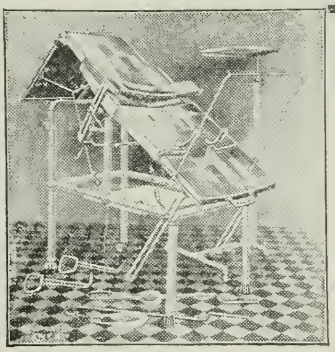

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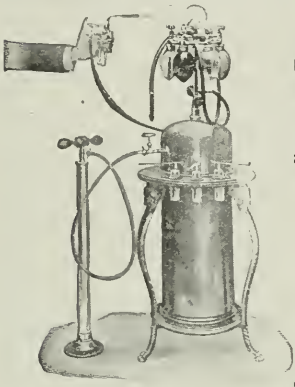

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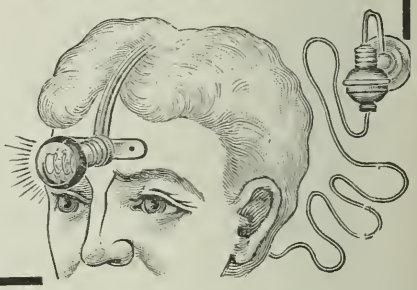

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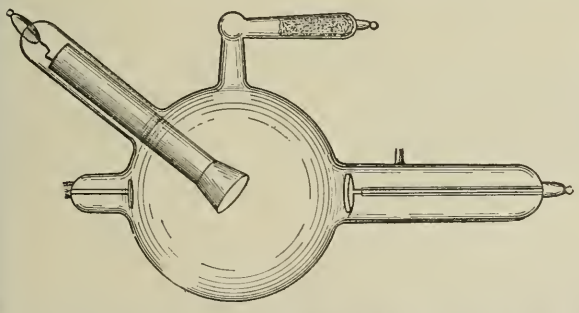

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It is pre-eminently the car for all sorts of roads.
It has an abundance of power.
Is easily controlled.
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And its cost of up-keep is known to be very small.

Read the testimonials on the next page and see how this car is regarded by physicians who are using it *every day* in their practice.

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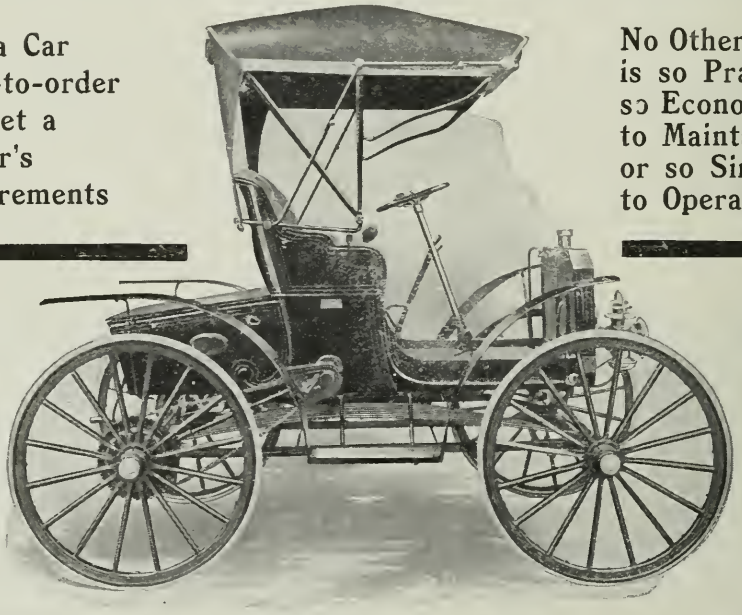

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$2,500 UNOPPOSED PRACTICE IN TOWN OF 300, good roads, fine country, in western Indiana, drugs and office fixtures. Reasons specialize. Address No. 1025 care of A. J. of C. M.

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FOR SALE—KNOX 5-PASSENGER AUTOMOBILE, 2 cyl. air-cooled, favorite physician's car, cost $2100, like new, want cash or Chicago real estate. Address No. 1027, care of A. J. of C. M.

FOR SALE—GAS DRY HOT AIR APPARATUS for arms and legs, the best made; electric light body cabinet; surgical table and chair. Address No. 1028, care of A. J. of C. M.

FOR SALE—MY THIRTY-TWO-DOLLAR DIRECT current, 110-volt Kimball cautery and outfit, seven knives, two handles, perfect order, fifteen dollars. F. O. Bryant, Chester, Pa.

EARLY IN 1907, THE PHYSICIANS FURNITURE Exchange was established at 35 E. Randolph St., Chicago, for the purpose of providing a "Clearing House" for the purchase, sale, or exchange of everything (second-hand or new) entering into the equipment of physicians' offices, or hospitals. This unique business has secured a large patronage from the profession, and is constantly extending its field of usefulness. Men of mature experience in the line of physicians' and hospital furnishings and supplies, are in charge. By the maintenance of the cash basis a low level of prices prevail. A number of exclusive specialties have been developed, among them the "Anderson Combination Stand," advertised in this issue, which has met with a most flattering sale.

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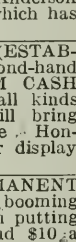

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An ideal health resort, especially attractive during the fall and winter months. Now well equipped with first-class hotels.

Excelsior Springs is not a Monte Carlo, and no gambling is allowed.

The mineral waters here supply an invaluable remedial agent for Diabetes, Bright's Disease, Lumbago, and all forms of Rheumatism and Uric Diseases, Insomnia and Hysteria.

Excelsior Springs is 465 miles Southwest of Chicago and 33 miles Northeast of Kansas City, on the Chicago, Milwaukee & St. Paul Railway.

It is reached from Chicago by the famous Southwest Limited, leaving Chicago at 6 P. M. daily, reaching the Springs for breakfast the next morning. Dinner and breakfast served on the train.
DESCRIPTIVE BOOK FREE.

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PART IN MANUFACTURING

Antiphlogistine

Inflammation's Antidote

From the moment the ingredients are placed in the specially designed compounding machine until the nurse removes the finished product from the sterilized container at the bedside, every move in the making is done by machinery and under the most rigid antiseptic precautions. By preventing exposure it is possible to conserve to the highest possible degree Antiphlogistine's hygroscopic properties.

No plastic dressing can be mixed in a mortar box with a hoe or in an ice cream freezer or even with a druggist's mortar and pestle and possess any scientific value. Its hygroscopic and osmotic qualities are necessarily ruined, owing to absorption of atmospheric moisture.

In using Antiphlogistine, the ***Original*** and ***Only*** antiseptic and hygroscopic plastic dressing on the market, the physician knows that he is getting the ***Best.*** Years of experience, specially designed machinery, a perfect container and the knowledge how, when and why, enable the originators of Antiphlogistine to turn out a remedial agent which in kind has never been equalled in the history of pharmaceutical manufacturing.

The wise medical man who believes in ***Original*** products, which are always the ***Best*** products, prescribes

Antiphlogistine
(Inflammation's Antidote)

The Denver Chemical Mfg. Co.
NEW YORK

RELY on it absolutely—National (the original) Glycerinized Vaccine.

Fifteen cents the point or tube. One fifty the package of ten. Good drug stores always have it.

National Vaccine & Antitoxin Institute
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RECTA-SEPTO
Hemorrhoidal Suppositories
(Originated by C. A. Passmore, Ph. G.)
An Antiseptic-Analgesic-Antiphlogistic and Non-Toxic remedy for diseases of the Rectum, Anus and Vagina.

This new therapeutic agent, entirely different from any combination heretofore used, will prove to be the most satisfactory remedy yet devised in the treatment of **HEMORRHOIDS, FISTULA** and **ULCERATIVE, CATARRHAL** or **CANCEROUS** conditions of the Rectum or Vagina.

It relieves the painful and inflamed membranes almost instantly, and more effectually than either morphine or cocaine, for its soothing and healing effect is continued and permanent.

CONTAINS NO NARCOTICS

A SAMPLE BOX GRATIS TO ANY PHYSICIAN ON REQUEST **$1.00 Per Box**

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or any chronic **Ulceration** of long standing can be promptly and permanently healed by daily applications of

OXYNOLEUM
The Oxygen Ointment which liberates nascent oxygen when brought in contact with open wounds, accounts for the immediate stimulation of faulty granulation in the filling out of strong new tissue, which follows its use. **Pain,** itching and smarting are allayed at once, and the open sore is rapidly converted into normal, resistant tissue.

To demonstrate the great value of **Oxynoleum,** sufficient quantity, with formula, will be sent free of expense in an unlabeled package upon request. Address:

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Looks like a diamond—wears like a diamond—brilliancy guaranteed forever—stands filing like a diamond—stands heat like a diamond—has no paste, foil or artificial backing. Set only in solid gold mountings. 1-20th the cost of diamonds. A marvelously reconstructed gem—sent on approval. Write for our catalog De Luxe, it's free.

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which physicians have heretofore experienced, has been replaced by the highest satisfaction when they prescribe

Pheno Papine Tablets
Perhaps in no class of remedies is the tendency to cheapen the product at the expense of remedial value so great as in products in which PAPAIN plays a part. Physicians can rest assured that PHENO PAPINE TABLETS are true to formula.

FORMULA—Papain, Pancreatin, Phenolphthalein, Charcoal, Soda Bicarbonate, Strychnine Sulphate 1-100 and Aromatics.

INDICATIONS for PHENO PAPINE TABLETS appear in disturbed functions or altered conditions all along the alimentary canal, the numberless Phenomena of gastric disturbances, duodenal pain or oppression; in the various forms of dyspepsia, in vomiting in pregnancy, in the treatment of various forms of nervous dyspepsia, it is a reliable and valuable therapeutic agent.

PHENO PAPINE TABLETS can be had without Strychnine Sulphate 1-100 gr.

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The Standard Drug & Chemical Company

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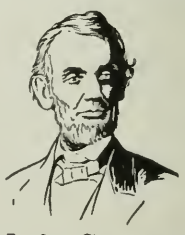
Samples and literature free upon application

Net Prices, 500 at $1.75, 1000 at $3.00



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There he lived and there his body lies entombed. Besides the interest which attaches to a visit to the grave, the Illinois State Capital contains Lincoln's old home and many other places of deep interest to visitors. If your ticket reads over the

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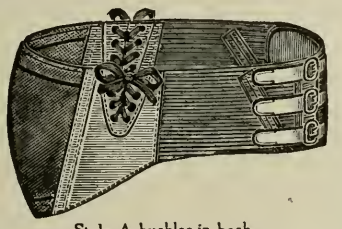
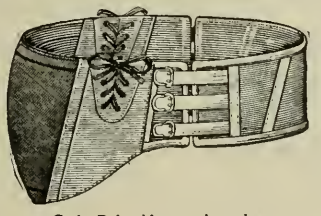
OUR SPECIAL ELASTIC BELT

Is the most popular low priced supporter



Style A buckles in back



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Silk.....$3.00 Thread....$2.25

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ABDOMINAL SUPPORTERS
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Essential Facts About

Dr. R. B. WAITE'S

Antiseptic Local Anaesthetic

For all minor surgical operations and the painless extraction of teeth

1st. IT IS ABSOLUTELY PURE. Each and every ingredient which enters into its composition must meet the requirements of our chemist, being subjected to a rigid test, before it is accepted for use in our laboratories.

2nd. IT IS UNIFORM. Owing to the scientific methods and great care exercised in combining the ingredients it does not vary, and you get the same results today, tomorrow or a year hence.

3rd. IT IS SAFE AND RELIABLE. No impurities are being injected when using Dr. R. B. Waite's Local Anaesthetic. Our guarantee of absolute PURITY is your protection.

4th. IT WILL NOT DETERIORATE, but will keep for years, consequently you always have ready to your hand, not only a perfect Anaesthetic, but Anticeptic, as well.

Free for Trial

one full ounce dollar bottle or one box of 12 ampules of 1 1-2 Cc. each upon receipt of $0.25 to cover expense of packing and postage, providing you have not yet taken advantage of this offer.

PRICES: 1 oz., $1.00; 6 ozs., $5.00; 20 ozs., $15.00
1 box, 12 ampules (1 1-2 Cc. each), $0.75; 12 boxes, $7.50

Manufactured only by

The Antidolar Mfg. Company
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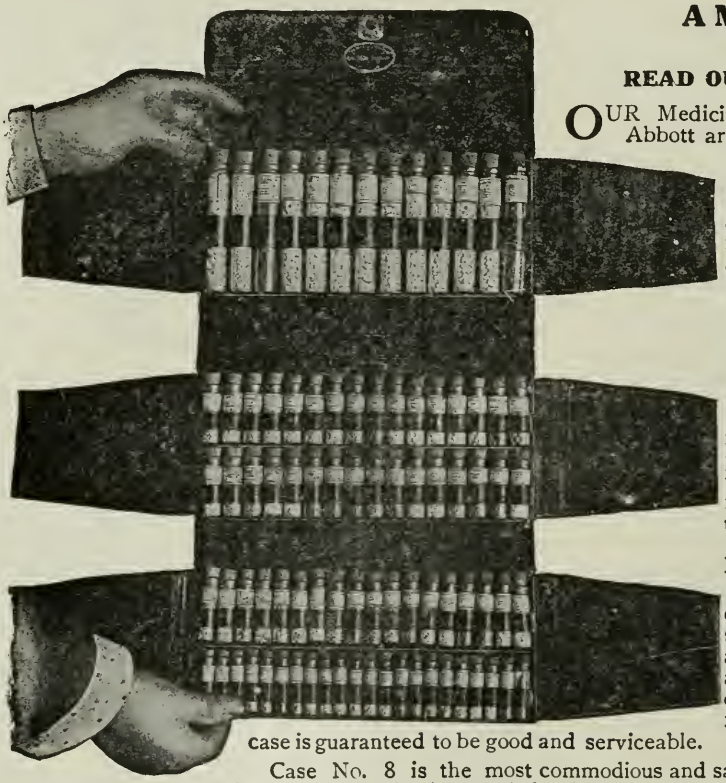
498 Argyle Ave., Montreal, Que.

"MULTUM in PARVO" A CASE WHICH CAN'T BE BEAT



A Marvel of Convenience

READ OUR SPECIAL OFFER

OUR Medicine Cases designed by Dr. Abbott are noted for their simplicity and usefulness. They are first class in every particular and for the purpose intended are the most practical cases made. A doctor looking for a new case is apt to be influenced by the price (first expense) to take one too small. We would warn against this. It is better to have one too large.

Of course, the case that will fit is determined in a great measure by the practice one does, but when we see an order go through for a "No. 8," we always feel that 'there is a man who will be satisfied'—one who will have a case second to none.

Our prices for filled cases are very low, considering the very large amount of goods they carry, and are only possible in the expectation that they will be re-filled many times. Every case is guaranteed to be good and serviceable.

Case No. 8 is the most commodious and satisfactory of all for the general practician. It carries 13 large bottles (top row) that hold 50 average 5 grain tablets; 32 bottles of the next smaller size of 300 granule capacity, then 18 of 200 and 22 bottles of 100 granules each in the third row. The total capacity is 85 remedies and the entire case filled weighs only 56 ounces.

The case itself is made of a fine grade of black seal-grain leather with a strong clasp and roomy pocket for cards, dispensing envelopes and blanks. When folded and closed this case measures 11¼ by 5¼ by 2¾ inches.

This case cannot be too highly recommended. It gives an opportunity for a large variety of granules, pills and tablets in sufficient quantity to meet the demands of general practice as shown by the following list of remedies which constitutes our regular filling:

Regular Filling: Subject to Change

FIRST ROW—LARGE BOTTLES—13—Anticonstipation; Calcium Iodized; Cathartic Active; Digestive No. 2; Diuretic Gen'l.; Dolor Pyrine; Intestinal Antiseptic W-A.; Nuclein 2 drop; Strych. Ars. 1-134; Triple Ars. w. Nuclein; Uterine Tonic Buckley's; Zinc and Codeine; Capsules.

MIDDLE TWO ROWS (16 vials each)—Aconitine Amor. 1-134; Waugh's Anodyne; Antiasthmatic; Arbutin 1-6; Barosmin; Brucine 1-134; Calomel 1-6; Calc. Sulph. 1-6; Calomel w. Aromatics; Calmative for Children; Cardiac Tonic; Catarrh Bronchial; Colchicine 1-134; Chlorodyne; Codeine Sulph. 1-67; Dos. Trinity No. 1; Defer. Comp. No. 1; Echinacea; Emetine 1-67; Digitalin gr. 1-67; Hydrastin, gr. 1-6; Heart Tonic; Morphine Sulphate 1-67; Papayotin, 1-6; Podophyllin 1-6; Quassin 1-12; Quin. Ars., 1-67; Quin. Hydrofer. 1-6; Strych. and Phos. Comp.; Sulphur Laxative; Triple Ars. No. 1; Zinc Sulphocarbolate gr. 1

THIRD (18) AND FOURTH (22) ROWS—Atropine Sulph., gr. 1-250; Boldine, gr. 1-67; Bryonin, gr. 1-67; Codeine Sulph., gr. 1-6; Copper Ars., gr. 1-250; Coryza No. 2; Glonoin, gr. 1-250; Hyoscyamine, gr. 1-250; Iridin, gr. 1-12, Macrotin, gr. 1-6; Mercury Bichloride, gr. 1-134; Mercury Biniod., gr. 1-67; Quin. Ars., gr. 1-6; Scutellarin, gr. 1-6; Santonin and Calomel; Strychnine Ars., gr. 1-30; Veratrine, gr. 1-134; Sanguinarine Nitr., gr. 1-67; Acid Ars., gr. 1-67; Agaricin, gr. 1-67; Anemonin, gr. 1-134; Antispasmodic No. 1; Apomorphine, gr. 1-10, Hypo.; Aspidospermine, gr. 1-67; Carmine; Cicutine Hydrob., gr. 1-67; Defer. Comp. No. 2; Dosimetric Trinity No. 2; Gelseminine, gr. 1-250; Glonoin and Strych. Hypo.; Hyoscine Hydrob., gr., 1-100, Hypo.; Lobelin, gr., 1-12; Nuclein Solution Hypo.; Pilocarpine, gr. 1-67; Saccharine, gr. 1-6; Sparteine Sulph. gr. 1-6; Strych. Nitr., gr. 1-67; Viburnin 1-6; Zinc Phos., gr. 1-6; Iodoform, gr. 1-6.

The regular price of Case No. 8 filled with our selection which we do not think can well be bettered, is **$22.50, prepaid cash with order.** Should our selection not please you on receipt, you are at liberty to return any you wish for similar priced goods. Just send us the bottle with instruction to refill with so-and-so and it will be done.

Never accept substitutes, always insist upon getting just what you ask for

Our Satchels

are good, first-class in every particular, and as heavy as is desirable, wear and convenience considered, and our prices (which include free delivery for cash with order) are as low as they can consistently be made

SATCHEL CASE No. 1. This is the one we recommend. It is a handy affair, in the "log-cabin" style, with no waste room. It contains 6 glass-stoppered bottles and several pockets for instruments, etc., all so arranged (designed by our Dr. Abbott) as to give the most practical results. This and our Nos. 8, 9, 5, or 4 drug case, as you prefer, will be just the thing. It is a great case.

DIMENSIONS AND PRICE

16 in. long, 6 high, and 5¾ wide - - **$7.25**
16 in. long, 7 high, and 5¼ wide - **7.75**

This is a good, substantial bag. It is made with seams at the corners, and it is one of the best of its class. It will carry any of our cases, and is one you will never regret buying. As listed above, it will be fitted with 6 regular glass-stoppered bottles. For 25c additional we will send 6 special "safety" bottles, as shown in cut—safety bottles alone, each, 15c; per half-dozen, 75c.

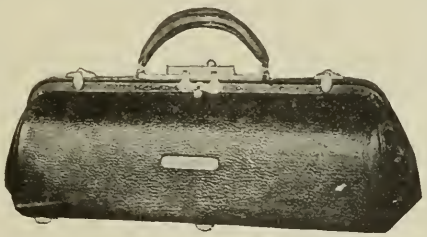
SATCHEL CASE No. 2. This little bag is convenient for obstetric blanket, forceps and other instruments, giving room for our granule cases, 1, 2, or 3, besides carrying 6 glass-stoppered bottles for anesthetics, disinfectants, etc.

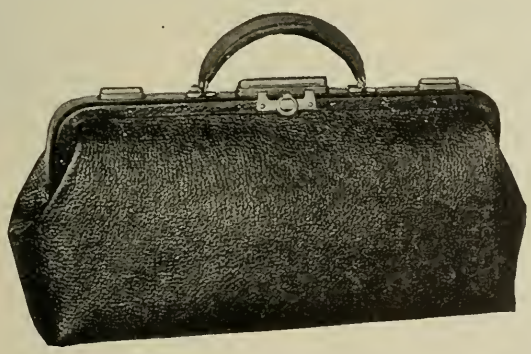
DIMENSIONS AND PRICE

16 in. long - - - - - - - - - - **$4.00**

Six special safety bottles, 25c additional; bottles alone, each 15c; per half-dozen, 75c.

The above is designed for one who prefers a special case for these occasions or only requires limited room. The busy general practician will prefer satchel No. 1, seven inches deep, which has room for the "roll" in addition to the usual medicine case outfit and the sundries always carried.





SATCHEL CASE No. 3. This bag is intended for a more roomy obstetric satchel, and as such is quite an improvement over the old style (No. 2), while at the same time it occupies little or no more space. It is made of one piece of leather with no corner seams, which is the weak point of the old bags. It is fitted with 6 glass-stoppered bottles.

DIMENSIONS AND PRICE

16 in. long, 8 in. high, and about 6 in. wide at bottom - - - - - **$4.75**

With screw-cap safety bottles, 25c extra. Bottles alone, each, 15c; per half-dozen, 75c.

This is an excellent, all-around satchel case for a lady physician or for anyone who is willing to sacrifice some of the capacity of No. 1 for looks' sake.

Note:—We can furnish any of our satchels in all lengths from 12 to 17 inches (prices on request), but we only carry the 16 inch in stock.

THE ABBOTT ALKALOIDAL COMPANY

MANUFACTURING CHEMISTS
Headquarters for Alkaloidal Granules, Tablets and Allied Specialties

RAVENSWOOD STATION, CHICAGO

Eastern Branch
251 Fifth Ave., New York City

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371 Phelan Bldg., San Francisco, Cal.

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225 Central Bldg., Seattle, Wash.

As a Matter of Comparison

Some form of support is a necessity in ninety per cent of the cases of Spinal Curvature, Pott's Disease, etc. These supports have usually been made of rigid, hard, unyielding material, which, while perhaps supplying the required support have other undesirable features, making the remedy almost as bad as the disease. Restricted respiration and heart action, hindrance to growth and development, muscular atrophy, scalded skin, etc., are some of the minor ills that accompany the wearing of jackets made of Plaster of Paris, Sole Leather, Steel, etc.

Here are a few of the many hundreds of old jackets and supports we have replaced with the Sheldon Appliance to the infinite satisfaction of physician and patient:

RIGID STEEL

STEEL, WITH CRUTCH

SOLE LEATHER

LEATHER, STEEL REINFORCED.

SPRING STEEL

STEEL AND LEATHER

PLASTER PARIS

WOVEN WIRE

YUCCA WOOD

STARCH

RAWHIDE

STEEL, LEATHER COVERED

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PLASTER PARIS

GLUE AND CLOTH

Here's The Comparison

This Sheldon Appliance is humane, cool and comfortable. It does not chafe or irritate even in the hottest weather. It provides just the required support, exerting a gentle, firm pressure where needed, yet permitting full respiration and proper muscular action. It lifts the weight of the head and shoulders off of the spine and corrects any deflection of the vertebrae. It weighs ounces where other spinal supports weigh pounds.

Every appliance is made to order, to fit the individual requirements of each patient in accordance with measurements taken by the physician. It is as easy to take off and put on as a coat. It cannot be detected through the clothing.

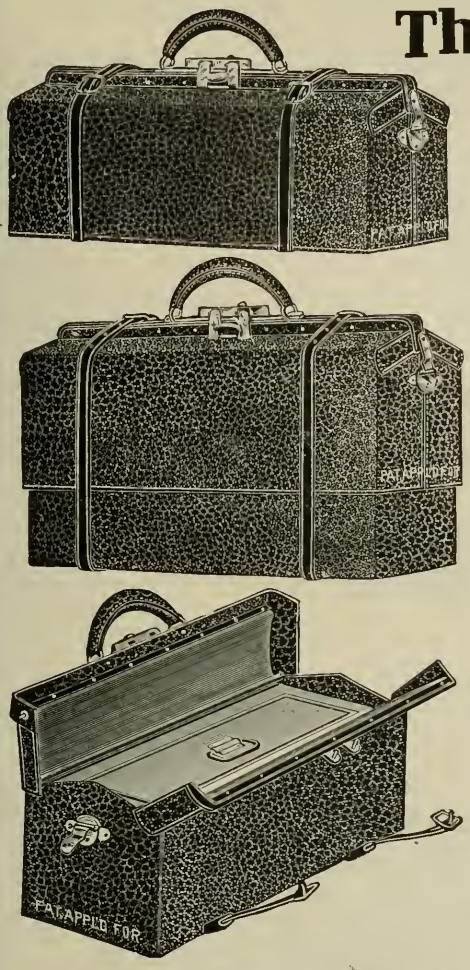
In over 14,000 cases, this Sheldon Appliance has produced results and given comfort to the patient far exceeding that derived from the usual Plaster of Paris or other unyielding Jackets.

We will be glad to send to any physician our plan for mutual co-operation which explains in detail just how the Sheldon Appliance is adapted to all forms of Spinal Curvature, Irritation and Pott's Disease.

We have fitted grandparents of 80 and over, and babies of a year and less.

PHILO-BURT MFG. CO., 13 11th St., Jamestown, N. Y.

Never accept substitutes, always insist upon getting just what you ask for



The "Capitain"

Aseptic Telescopic Combination Bag and Sterilizer

Pat. Applied for

Bag and Sterilizer all in one. Both telescope together or independently. Capacity of neither limited.

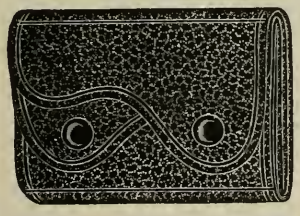
Every Physician who has seen it pronounces it the most practical outfit for Obstetric, Emergency, and Surgical work.

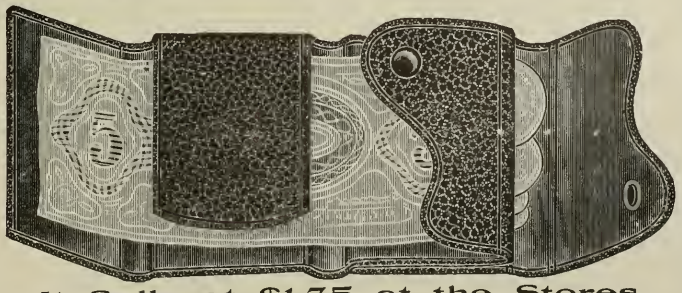
Lack of space prevents going into detail, but send for our catalogue, which illustrates and describes this bag and about two hundred other bags and cases for physicians.

It Will Surprise You

to see how large and complete a line we make.

Combination Bill Book and Purse





Price, $1, POSTAGE PAID

Including your Name Printed in gold letters

It Sells at $1.75 at the Stores

Made of Genuine Turkish Morocco, full leather lined, dimensions when closed 3 1-2 x 2 3-4 x 1-2 inches

THE HANDIEST WAY TO CARRY BILLS AND CHANGE

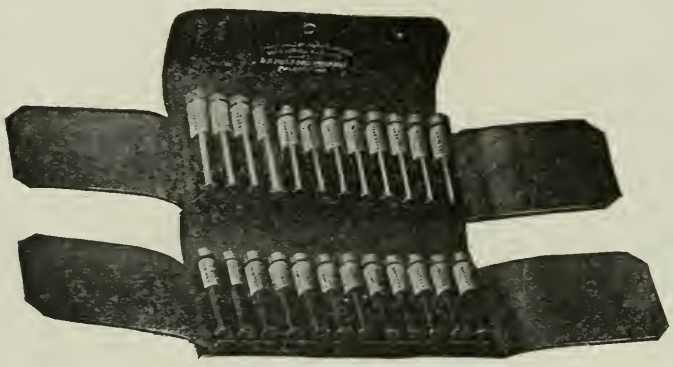
We offer you this purse at cost to us to enable you to judge our make of goods

WESTERN LEATHER MFG. CO., 44 Wabash Ave. Chicago

The High Standard of Mulford's Antitoxins is maintained in the excellence of Mulford's Pharmaceuticals

EVERY physician appreciates his medicine case, and it is because our cases differ from all others on the market that we make these special offers.

That our business has been successful, lies in the fact that we have been able, in many instances, to anticipate the demand of the practitioner and in every instance to give thorough and conscientious service.



Size, 7 1-8 x 3 3-4 x 1 1-2 inches

Some years ago we took up the manufacture of physicians cases and by introducing special features our cases are recognized as the best made. The record of having supplied most of the cases sold in this country during the past five years is proof of this statement.

POCKET CASE, No. 2

Soft flexible case, black seal-grain leather; contains twenty-four 2-dram screw-cap vials (cork vials if preferred); pocket for sundries; flat catch; fitted with our patent spring clasps for holding bottles.

Pocket Cases No. 2 and No. 15 are filled with the following selection:

Aconite Tinct., 1 min.; Antiseptic, No. 6; Bismuth Beta-Naphtol Comp.; Bismuth Subnit. and Ipecac Comp.; Bronchitis, No. 3; Bronchitis, No. 1; Brown Mixture Comp.; Calomel, Ipecac and Soda, No. 1; Calomel, Sacch., 1-10 gr. (for children); Cathartic, Active; Chlorodyne; Coryza, Improved; Dover's Powder, 2 1-2 grs.; Dyspepsia Fermentative; Ergotin, 1 gr.; Fever (Davis); Kermes Mineral Comp.; Morphine Sulph., 1-6 gr.; Nitroglycerin Comp. (Heart Tonic and Stimulant); Pepsin, Capsicum Comp. (Digestive); Phy-Sagra (Anti-Constipation; Quinine Sulph., 2 grs. (chocolate-coated); Tonsillitis; Viburnum Comp. (Uterine Tonic).

POCKET CASE, No. 15

THE MOST DURABLE POCKET CASE EVER INTRODUCED

Contains twenty-four 2-dram screw-cap vials (cork vials if preferred); made of best black sole leather; hand-sewed; lined with plush and provided with our patent spring clasps for holding the vials. Very complete, handsome and serviceable.

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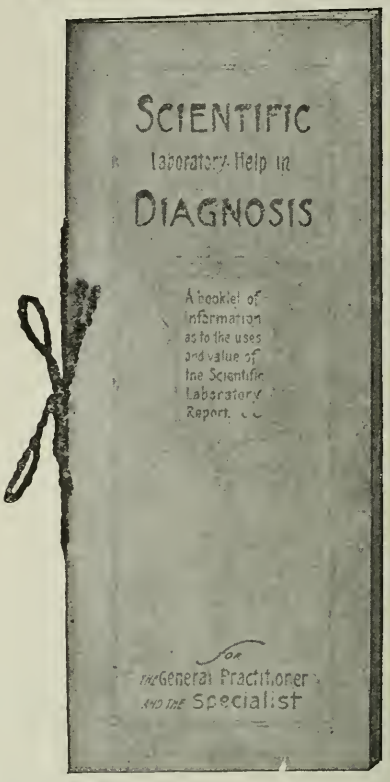
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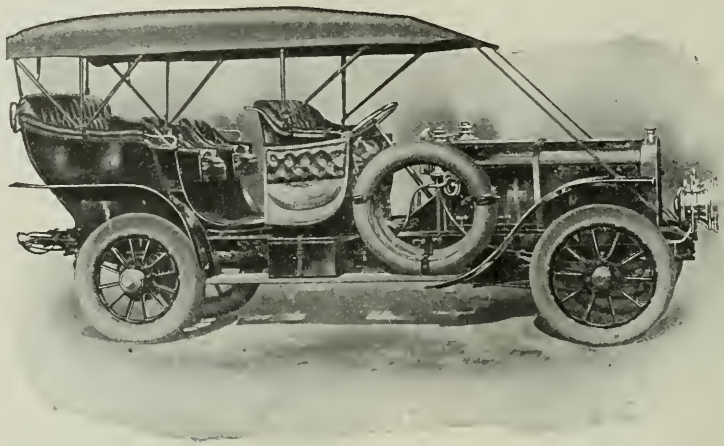

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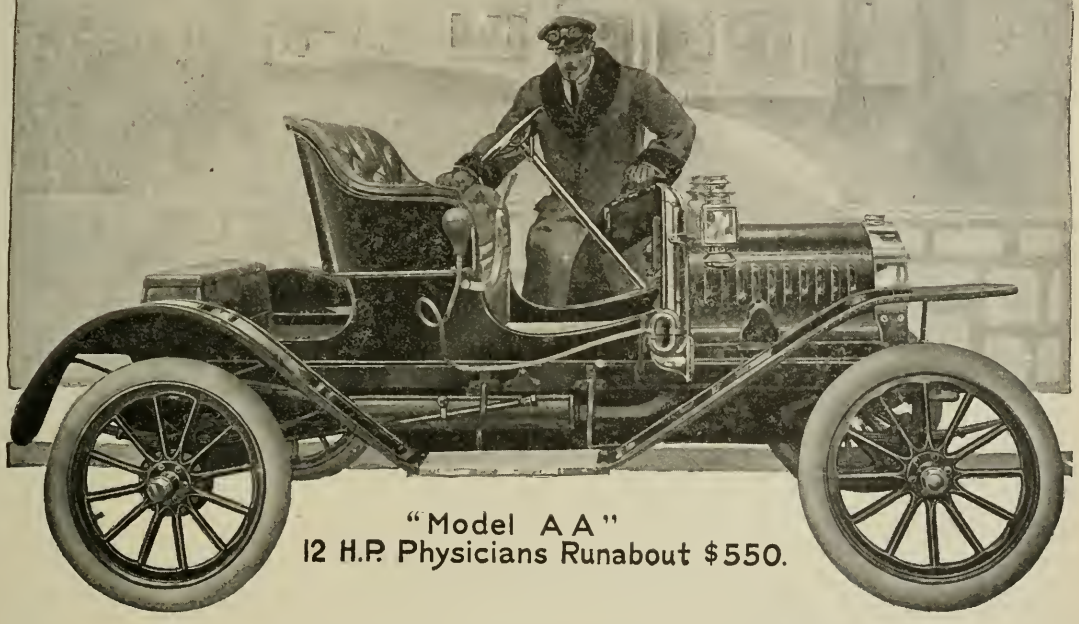

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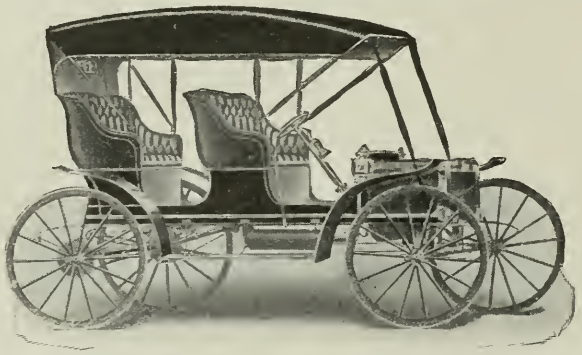

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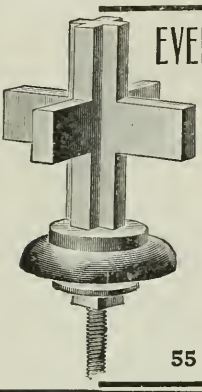

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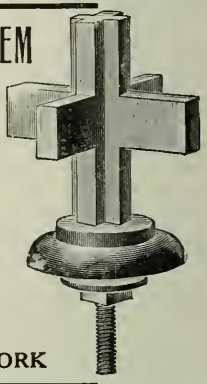

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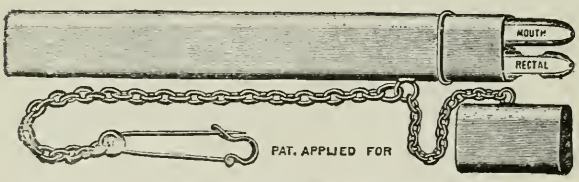

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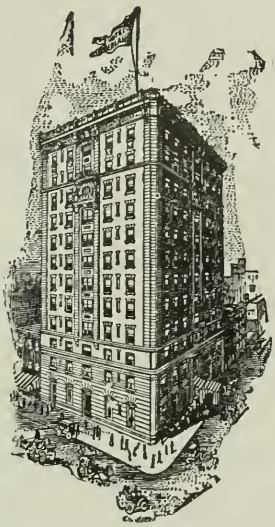

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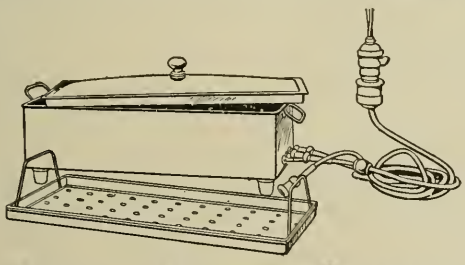

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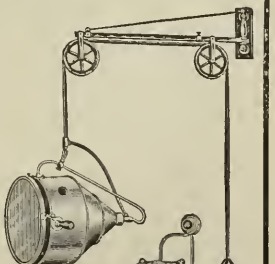

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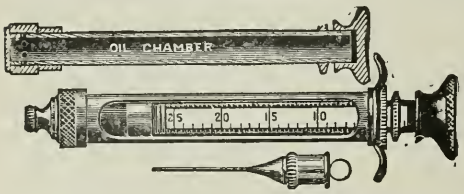

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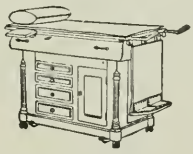

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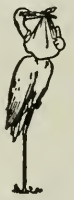

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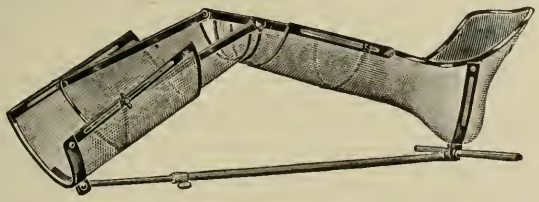

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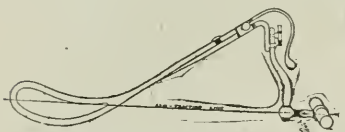

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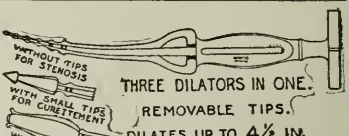
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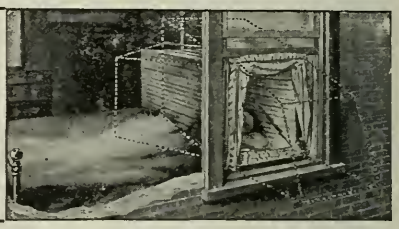

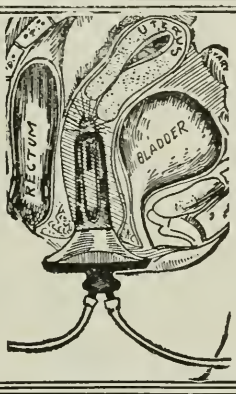

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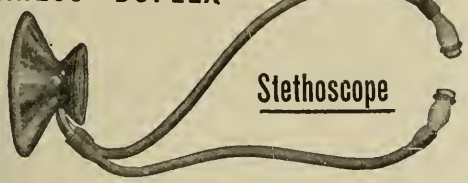

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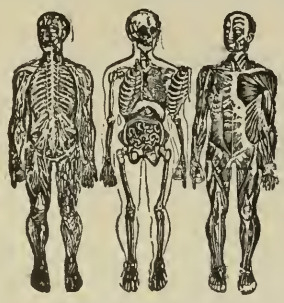

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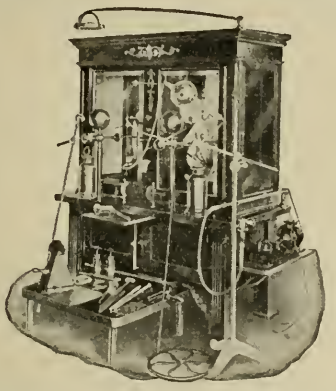

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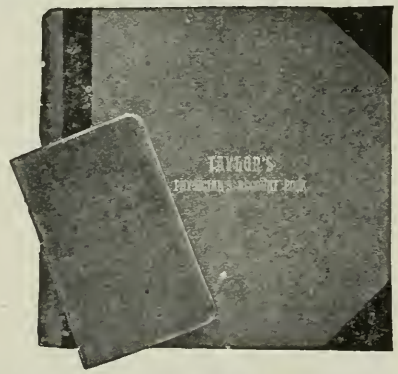

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